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ABSTRACT

SCICON, currently designating the Clemmie Gill School of SCIence and CONservation, is an environmental education program providing sixth grade students opportunities to learn about science, conservation, and ecological relationships in the natural environment. The title, SCICON, designates both a school campus and an instructional program. Section I of this report describes the planning grant application, a two-part proposal to: (1) coordinate and facilitate a multidisciplinary and interdisciplinary approach to environmental education which integrates the natural sciences, behavioral sciences, and humanities into a unified approach to problem solving and learning, and (2) establish, under a unique administrative system, various centers and facilities for research and study. Section II gives an overview of the program, philosophy, and facilities. Formation, activities, findings and recommendations of the task force for developing the master plan are detailed in Section III. They consider centers for administration-operation, environmental education, humanities, and conferences. Section IV delineates educational specifications for the four centers, outlining requirements for site, planning, and space. A description of the long range planning program and a site and facilities map comprise Section V while Section VI deals with project development and construction - phasing and priorities, recommendations for additional land acquisition, and budget costs. (BL)

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SCICON MASTER PLAN

A REPORT TO THE
EDUCATIONAL FACILITIES LABORATORY

August 1971

Tulare County Department of Education
Max Cochran, Superintendent of Schools

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INTRODUCTION

Thousands of man-hours of effort have gone into the report you have in your hands. It is the result of an opportunity afforded by a planning grant from the **Educational Facilities Laboratory,** a function of the Ford Foundation, to the Tulare County Department of Education's Division of Instruction, for the purpose of devising a master plan for what we in our county honestly believe can be the most unique educational facility ever devised.

Money to implement the project has been considered no object. We have **none** of the considerable amount necessary to bring the project into being; but we present this unusual and magnificent proposal for a new approach to learning with the sincere conviction that its timeliness, its proposals for solutions to the ubiquitous deterioration of the environment and man's effort to produce students adequate to the challenge the world faces now, and in the near future, will elicit the funding necessary.

It is our solemn opinion that man's most basic attitude is that of self-preservation. The **how** and **what** of the culture is the job of the school to teach about. We, the teachers, are in a very real sense the mediators of the culture. With this presentation of the cerebration of hundreds of individuals, we, for a moment, rest our case, knowing that individuals will recognize the merits of the plan and work to assist in the preservation and a new enculturation of our people and the world.

Max Cochran, Superintendent
Tulare County Department of Education

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TULARE COUNTY DEPARTMENT OF EDUCATION

Planning Grant Participating Members

Max Cochran	Superintendent, Tulare County Department of Education
Charles K. Rich	Director of Science and Conservation Education, Director of **SCICON**
Dean Hall	Assistant Superintendent, Business Services
John Vaccaro	Assistant Superintendent, Educational Services
Ralph Harding	Administrative Assistant
George Haden	Director of Curricular Services
Dr. Rudolph Weyland	Coordinator of Arts, Humanities and Secondary Education
Sabin Gray	Supervisor-Coordinator of Art, ETV, Impact Center, and Educational Resources Center
Dr. Guy Chapman	Director of Special Services
Polly Ash	Assistant to the Director of **SCICON**
Shirley Sayre	Assistant in Charge of Operations, **SCICON**
Noel Fitzgerald	Assistant in Charge of Program, **SCICON**
Roy Hartley	Head, Maintenance, **SCICON**
Edmund Silverbrand	Coordinator of Math and Publications
Robert McCarthy	Coordinator of Physically Handicapped Programs
Marjorie Jenan	Secretary, Educational Services Division
Noreen Cosyns	Secretary to Director of **SCICON**

EXECUTIVE BOARD

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CHARLES K. RICH, Director of Science and Conservation
Education and Director of **SCICON**, Tulare County Department of Education

*SCICON

THE SCICON STAFF

Charles Rich	Director
Polly Ash	Administrative Assistant to the Director
Noel Fitzgerald	Assistant in Charge of Program
Shirley Sayre	Assistant in Charge of Operations
Leroy Hartley	Maintenance Supervisor
John Kline	Interpreter
Hildor Barton	Interpreter
Floyd Brown	Interpreter
Maurine Brown	Interpreter
Herman Farrow	Interpreter
Jessie Wilson	Head Cook
Lorene Worden	Cook
Stella Phillips	Cook

STUDENT INTERN PARTICIPANTS

The Student Interns at SCICON – 1968-70

A rich resource which has been available to the Planning Control Committee for **SCICON** has been the group of student interns in residence during the past two years. Twenty-two young men and women have lived and worked for varying periods of time extending from several months to two years and have served as support personnel for the program. They have performed various duties related to instruction, counseling and administration. They have assisted in every way from performing hard physical labor to planning and conducting in-service programs for teachers. All are either university or college graduates or they have academic programs in progress. Some plan careers related to outdoor and conservation education and ecological studies.

Perhaps one of their most important contributions has been to provide counsel, both formally and informally, for the Planning Control Committee in its studies and deliberations. They have given literally hundreds of hours of time and contributed much wisdom, insight, and creative thought to the planning process.

Following is a list of the student interns, together with the colleges or universities with which they have, or have had, major affiliations as students:

David Alcott	Fresno State College
Jim Barnes	Pacific College (Fresno)
Sandy Bennett	College of the Sequoias
Nancy Biskovich	College of the Sequoias
Jim Carlson	Williamette University
Troy Cox	University of California/Berkeley
Donna Davis	San Francisco State College
Tona von Egert	San Francisco State College
Judy Emerson	University of California/Santa Cruz
Nancy Fishbein	University of Wisconsin
Don Gale	Prescott College
George Grist	San Francisco State College
Tom Haas	University of Connecticut
Gary Matson	University of California/Santa Cruz
Caitriona Moloney	San Francisco State College
Melinda Moore	University of California/Santa Barbara
Greg Muir	University of Idaho
Swanna Osteroos	University of North Dakota
Tom Smith	University of California/Berkeley
Steve Stoll	University of California/Los Angeles
Mary Street	Porterville College
Lynne Webster	California Poly/San Luis Obispo

PROJECT PLANNING CONTROL COMMITTEE

Chester Troudy, Chairman
Superintendent, Woodlake Union Elementary School District

Max Cochran, Superintendent
Tulare County Department of Education

Laurence Elrod, President, Friends of **SCICON**, Inc.
Superintendent, Cutler-Orosi Unified School District

Robert Felts, Legal Advisor
Friends of **SCICON**

Jane Fiala, President, 21st District
California Congress of Parents and Teachers

Howard Glover, Chairman, **SCICON** Executive Board,
Superintendent, Earlimart Elementary School District

Sabin Gray, Director, Educational Resources Center
Tulare County Department of Education

Dean Hall, Assistant Superintendent in Business Services
Tulare County Department of Education

Ralph Harding, Administrative Assistant
Tulare County Department of Education

Leon Johnson, Business Advisor
Tulare County Department of Education

John Kline, Science and Music Coordinator
Visalia Unified School District

Dr. David H. Paynter, Director, Planning Grant
Superintendent, Garden Grove Unified School District

Arthur Pursell, Tulare Astronomical Association

Charles K. Rich, Director of Science and Conservation Education
Director of **SCICON**, Tulare County Department of Education

Dr. Rudolph Weyland, Coordinator of Arts, Humanities, Secondary Education
Tulare County Department of Education

SPECIAL CONSULTANTS TO PROJECT

DR. PAUL BRANDWEIN, President, Center for the Study of Learning;
author and teacher

DR. DONALD MacDONALD, Associate Director
Oregon Museum of Science and Industry

DR. MARIO MENESINI, Director, NEED
National Environmental Education Development

DR. EUGENE HOWARD, President
International Learning Corporation

GEORGE HOUGHTON, Director of Science and Conservation
Kern County Department of Education

ROMA PHILBROOK, Manager
Asilomar Conference Grounds

EARL BURROWS, Associate
Center for the Study of the Person

BEATRICE KRONE, Idylwild Arts Foundation

ROBERT TAYLOR, Director, Kingsburg Observatory
Kingsburg Union High School

DR. WALTER LORENZ, Astronomer
Kingsburg Observatory

DR. JAMES KIRWAN, Oregon Museum of Science and Industry

RICHARD HARRIMAN, Professor, Stanford University

DAVID WEISSMAN, Department of Biology, Stanford University

KAREN WEISSMAN, Department of Biology, Stanford University

DR. RAYMOND KRONE, University of California at Davis

DR. CHARLES GOLDMAN, University of California at Davis

DICK EDMISTON, Special Advisor
Businessman, Visalia, California

GEORGE TREICHEL, Professor of Geography, San Francisco State College

THE PLANNING GRANT PROJECT WRITING TEAM

Dr. David H. Paynter

Dr. David H. Paynter, the Planning Grant director, serves as superintendent of Garden Grove Unified School District, which is the eighth largest school district in the state. He directs a large professional staff in implementing an innovative and forward looking program of experimentation and unique practices.

Dr. Paynter has served in many professional capacities at all levels of education, including elementary, secondary, college and university. He has served also as an administrative assistant and director of business services for county schools offices. He has been superintendent of several major school systems in California. In 1965 he was appointed director of the Job Corps Conservation Center, Office of Economic Opportunity. He directed the establishment of seventy Job Corps Centers in thirty-six states. Dr. Paynter has served as a visiting professor of education at California State College at Fullerton and at the University of Southern California. He holds many positions of leadership in community and professional organizations. Currently he is a member of the board of directors of the Marine Studies Institute of Orange County. His position as director of this Ford Foundation Planning Grant for **SCICON** reflects his deep interest in conservation and environmental education.

Dr. Arne J. Nixon

Dr. Arne Nixon, Professor of Education and Chairman, Department of Elementary Education, Fresno State College, served as chief project writer for this report. He has been involved in the **SCICON** program from its beginning, serving as a member of its first executive board. At that time he was Assistant Superintendent for Instruction, Tulare City School District. Dr. Nixon has spent his entire professional career in instruction and administration and has served as teacher and administrator at elementary, secondary and college and university levels. Currently he serves on the administrative staff at Fresno State College and teaches courses on curriculum and cultural foundations of education at that institution. Dr. Nixon has served also as a specialist in international education and as an adviser in teacher education to the Ministry of Education, Republic of the Sudan. He serves as consultant and program evaluator for many state and federal programs in education. He is author of various professional papers and articles.

Charles K. Rich

Charles K. Rich, director of **SCICON** and director of Science and Conservation Education, Tulare County Department of Education, was the originator and founder of **SCICON** and has served as its director continuously from its inception. He has served also as a member of the project writing team.

Mr. Rich, who has been a curriculum specialist and administrator in the Tulare County Department of Education for more than twenty years, has a rich and varied background in education. He is a graduate of the University of California and has done graduate study at San Francisco State College and Stanford University. A native Californian, he has taught at various levels of public education, including service as a teacher in a one room rural school. He has served on the administrative staffs of the public schools at Berkeley and Redlands. As a young man, he served in the original Civilian Conservation Corps. He is a world traveler. Mr. Rich has served as visiting professor at Fresno State College, San Francisco State College, and he has also taught for University of California Extension Division.

Widely recognized as an authority on conservation and environmental education, Mr. Rich has served as consultant to many school systems and agencies.

Noel Fitzgerald

Noel Fitzgerald, fourth member of the **SCICON** Planning Grant writing team, serves as a member of the administrative staff of **SCICON.** She is Assistant in Charge of Program. Mrs. Fitzgerald's involvement with the program has gone on for several years; initially she served in a voluntary capacity, working in the community as an interpreter of the program and also on campus. She became a member of the instructional staff, serving as an interpreter for classes of children. She served as a member of the Behavioral Sciences Center Committee, representing parental and community needs and viewpoints on that committee. Her community activities include active involvement with PTA on unit, council and district levels for many years and in various capacities. She has been actively involved in efforts to establish a Tulare County Crisis Intervention Center and Drug Abuse Center. She has been associated also with the League of Women Voters and has served as a community recreation director.

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ARCHITECTURAL FIRM FOR PLANNING AND DESIGN

Founded in 1946 and headquartered in Los Angeles, Daniel, Mann, Johnson, & Mendenhall is a multi-discipline firm of architects, engineers, planners and designers. They specialize in master planning, designing and construction administration of a broad variety of projects.

DMJM provides diverse design and engineering services ranging from feasibility studies and master plans through design drawings and supervision of construction. Branch offices are located in Washington, D.C., San Francisco, Portland, Hawaii and Tokyo.

Among many projects completed by the firm are master plans and designs for Moorpark College in Ventura County, Leeward Oahu Community College in Honolulu, Hawaii, and Holyoke Community College in Holyoke, Massachusetts. Master plans have been completed for the North Portland Peninsula Development, the Conejo Valley Land Development, and the historical restoration plan for Virginia City, Nevada. In addition, the firm has completed design and construction administration for the Communication Satellite Research and Development Lab in Clarksburg, Maryland, and the Aeronautic Research and Development Center in Newport Beach, California.

SECTION I

INTRODUCTION

The "How and Why" of This Report

Description of the Planning Grant

SECTION I

The "How and Why" of This Report

At this anxious moment in time, as troubled and frightened men consider the complex and tenuous problems of the human agenda, they are filled with foreboding and concern. Problems of human conflict, annihilation and survival, racial and ethnic hatreds, economic frustrations, social disintegration, intergenerational antagonisms, deepening crises of crime and delinquency, burdens of poverty and hunger, and steadily eroding qualities of environment and diminishing amenities of living challenge men to find creative solutions to these and other constellations of problems, if they are to survive and prosper.

> As men live with the awesome specter of a world which seems to be rushing at cataclysmic speed toward the destruction of life itself, as they witness the violation of an earth whose irreplaceable resources are being destroyed without concern or mercy, they become increasingly anxious at the mindless destruction of those very sources of life and strength which nourish men's bodies and those resources of beauty which exalt their spirits and strengthen their fragile claims to life upon this earth.

In such troubled and perilous circumstances, men propose many solutions. Some are based upon despair and fear. Some are pedestrian and shallow. Some are the products of blind eyes which see no visions and of old men who dream no dreams. Some reflect the apathy of men who have already surrendered. Some degrade human potentialities.

Others exalt the potentialities of man. They are rooted in faith and hope. They are the visions of men who look into the faces of children and see a future unshadowed by despair; they move toward horizons which spring open before them as they walk toward the City of God which the prophets of mankind have postulated through the ages. They declare a persistent and enduring faith that man is entirely capable of utilizing his vast funded capital of physical strength, intellectual abilities, and ethical values not only to solve the problems of the present moment, but indeed to conceptualize and order new relationships and resources and circumstances of goodness and beauty and truth.

> IT IS TO SUCH AN OPTIMISTIC COMMITMENT OF HUMAN LIFE AND ITS DESTINY THAT **SCICON** IS DEDICATED. **SCICON** IS PREDICATED UPON THE BELIEF THAT IT IS THROUGH THE MEANINGFUL EDUCATION OF PEOPLE, AND OF CHILDREN MOST PARTICULARLY, THAT THE FUTURE OF MAN UPON THIS EARTH WILL BE SHAPED. IT IS THROUGH A WISE AND MEANINGFUL EDUCATION THAT MAN CAN BEST UNDERSTAND AND COME TO TERMS WITH HIS WORLD.

As men come to understand better their relationships with their natural environment and with their fellow men, they will begin to develop better understandings of the whole complex relationships with living and non-living systems which sustain man and bind human society together. Now we know with certainty that if education is to be relevant to human survival, it must focus upon ecology and relationships between man and his natural world. It is upon that natural world that man depends, for it provides the precarious base upon which his fragile existence must rest. And it is that natural world which is so gravely threatened by man's failure and unwillingness to understand and accept the consequences of his social and technological actions and behavior.

> **SCICON** IS AN EDUCATIONAL PROGRAM WHICH IS ROOTED IN THAT ENLIGHTENED CONCEPT OF EDUCATION. IT IS DEDICATED TO THE CONCEPT THAT EDUCATION, IF IT IS TO SERVE HUMAN NEEDS AND INSURE HUMAN SURVIVAL, MUST PREDICATE A LIVELY AND VITAL CONCERN FOR THE CHANGING CIRCUMSTANCES AND VALUES OF HUMAN SOCIETY.

Certainly such flexibility is nothing new to American education, for it has always been the genius of American education that it has been responsive to new needs and conditions, and its objectives and practices have changed constantly as the objectives and needs of the nation have changed. Education for the select few became education for all; a limited education which prepared men only to read the Scriptures was replaced by education which attempted to prepare men to govern themselves more intelligently; education which was primarily concerned with preparing rural citizens for a simple pastoral life progressed to preparing the young for life in an infinitely more complex urban society; vocational training was supplemented by the problem of enculturating millions of newly arrived immigrants from every corner of the earth. Today, one of the major challenges has become one of how to integrate an alienated and angry segment of society into the mainstream of American life.

AT THIS CRITICAL JUNCTURE IN HUMAN AFFAIRS, IT IS EVIDENT THAT ONCE MORE THE PURPOSES AND DIRECTION OF EDUCATION MUST CHANGE. AS MAN CONSIDERS A SOCIAL CONDITION IN WHICH TECHNOLOGICAL MECHANIZATION AND LACK OF HUMAN COMMUNICATION ARE STEADILY ERODING THE ABILITY OF HUMAN BEINGS TO LIVE WITH DIGNITY, TO REACH FULFILLMENT, AND INDEED, THREATENING THEIR VERY SURVIVAL, IT IS EVIDENT THAT NEW AND CREATIVE APPROACHES ARE INDICATED.

Such a mandate for change challenges every individual and agency which is concerned with the educational enterprise. It challenges **SCICON,** among others, to consider as thoughtfully and wisely as it can, its own purposes and directions. How can this program provide for more meaningful experiences of education on levels which emphasize human service rather than mere physical productivity, the significance of which diminishes daily in the wake of technological progress? What approaches are indicated?

A. It is quite evident that such an education must equip young people to deal with problems which are **present** and **real**, and particularly those which are concerned with the **quality of life and its perpetuation**; since the implications of such an education are many, complex and multifaceted, it is also quite evident that it must emphasize an interdisciplinary approach which utilizes without apology and borrows without embarrassment from any fields of human knowledge and wisdom whatever information, skills, and methodologies are useful and appropriate. **It must be a problem-centered education, and the problem is human survival.**

B. We at **SCICON** are persuaded that the humanities, natural sciences, and social sciences can and must be interrelated to concentrate upon studies in **human ecology**. Such studies will enable a student at all levels of learning and sophistication to perceive with greater accuracy and sensitivity the dimensions and problems of the world in which he lives. They will provide him with better tools for shaping his environment and for interacting more meaningfully and realistically with it.

Such an integration of human knowledge is not a new concept, surely, but its implementation seems to be incredibly difficult. Indeed the trend in education in recent years has not been toward a unification of human knowledge or toward its integrated use in problem solving but rather toward an ever increasing specialization where scholars no longer even have a common universe of discourse. Long since have most humanists ceased communicating with the scientists, and indeed so specialized have the scholarly disciplines become that translation is required even within related disciplines. Scholars build ever higher and higher fences of semantics around themselves, and they are no longer able to know each other or to share their wisdom, one with another.

Yet we know that in the real world, human beings desperately **need** a willingness and skill in working cooperatively with each other, a reality which is too often lost sight of by an educational system which still stresses kinds of competitiveness and aggressiveness which may once have been appropriate for survival on a wild frontier, but which hardly fit today's interrelated and interdependent society. Conventional schools have not accepted this concept too often, and they remain one of the most fiercely competitive institutions in our national life, continuing to cater to a society which is based these days not so much upon competitive relationships but rather upon incredibly complicated systems of cooperative functioning. It seems hardly necessary to point out that no automobile was ever designed, engineered, produced and distributed without the cooperative efforts of literally hundreds of thousands of individuals and agencies. The awesome and superb efforts which sent man to walk upon the face of the moon involved the magnificent contributions of literally thousands of other men – mathematicians, physicists, chemists, engineers, meterologists, biologists, physicians, production experts, mechanics, administrators, and others too many to name or number, and they worked closely and cooperatively together, for if the efforts of even one had broken down, it would have meant disaster.

WE SPEAK, THEN, FOR AN EDUCATIONAL CONCEPT AND PROGRAM WHICH IS CAPABLE OF DEVELOPING HUMAN BEINGS WHO CAN RELATE TO THEIR ENVIRONMENT AND TO EACH OTHER IN ORDERING SOCIAL CIRCUMSTANCES WHICH CAN ADJUST TO CHANGE, FOR CHANGE REMAINS THE ONLY CONSTANT IN THE HUMAN EQUATION. IT MUST BE AN EDUCATIONAL PROGRAM WHICH IS INTERDISCIPLINARY IN NATURE, ONE WHICH BORROWS FREELY AND WITHOUT APOLOGY FROM ALL RELEVANT DISCIPLINES WHATEVER IS APPLICABLE AND APPROPRIATE OF MAN'S MAGNIFICENT RESOURCES OF KNOWLEDGE. IT MUST BE ROOTED IN A COMPASSION FOR MAN AND HIS CIRCUMSTANCES OF LIVING AND SURVIVAL, AND BECAUSE IT CARES FOR MAN AND IS BASED UPON A REVERENCE FOR LIFE, IT MUST BE CONCERNED WITH THE CONSERVATION AND ENRICHMENT OF HIS PHYSICAL ENVIRONMENT WHICH PROVIDES THE BASE UPON

WHICH HE EXISTS. IT MUST BE AN EDUCATION WHICH IS HUMANELY ORIENTED. PRESENT PROGRAMS OF EDUCATION ARE STAGGERING UNDER THE BURDEN, AND IT BECOMES INCREASINGLY APPARENT THAT NEW APPROACHES ARE INDICATED. **SCICON** IS UNIQUELY EQUIPPED TO OFFER SUCH NEW AND CREATIVE APPROACHES.

SCICON HAS EXISTED NOW FOR MORE THAN A DECADE, CONDUCTING EXPERIMENTAL AND INNOVATIVE PROGRAMS IN ENVIRONMENTAL EDUCATION, PRIMARILY FOR ELEMENTARY SCHOOL CHILDREN. ITS DEMONSTRATED SUCCESSES IN THIS FIELD SUGGEST THAT THE TIME HAS COME FOR IT TO MOVE TOWARD LARGER AND MORE GENEROUSLY CONCEIVED PROGRAMS OF EVEN GREATER RELEVANCE AND INVOLVEMENT. OUT OF A CONVICTION THAT **SCICON** SHOULD BEGIN MOVING INTO MORE EXTENSIVE FIELDS OF SERVICE CAME THE DECISION TO BEGIN TO PLAN FOR A PROGRAM WHICH WOULD EXPAND THE HORIZONS OF THE PRESENT ACTIVITY AND WHICH WOULD BE UNLIKE ANY EXISTING PROGRAMS, INCLUDING THOSE OF COLLEGES AND UNIVERSITIES. IT WOULD FOCUS ON THE MAJOR UNRESOLVED PROBLEMS OF HUMAN EXISTENCE AND SURVIVAL, APPROACHED THROUGH INTERDISCIPLINARY STUDIES, AND WITHIN A MATRIX OF ENVIRONMENTAL EDUCATION. IT WOULD BE A PROGRAM WHICH WOULD CATER TO THE NEEDS OF ALL, FROM YOUNG CHILDREN TO THE MOST SOPHISTICATED RESEARCHERS AND SCHOLARS.

WITH FULL AWARENESS OF THE MAGNITUDE OF THE TASK INVOLVED, THE DECISION WAS MADE THAT A COMPREHENSIVE PROGRAM OF PLANNING WAS INDICATED AS THE NEXT STEP. IT WAS IMMEDIATELY CLEAR THAT EXTENSIVE ADDITIONAL RESOURCES OF PERSONNEL, TIME, AND FUNDS WERE NEEDED TO IMPLEMENT SUCH PLANNING, FOR IT COULD NOT BE HASTILY OR CASUALLY DONE. AT THAT POINT THE DECISION WAS MADE TO SEEK SUPPORTIVE FINANCIAL RESOURCES TO SUSTAIN SUCH A MAJOR PLANNING AND RESEARCH EFFORT. A COPY OF THE APPLICATION WHICH WAS SUBMITTED TO THE **EDUCATIONAL FACILITIES LABORATORY FOLLOWS.**

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THE PLANNING GRANT APPLICATION

(Below is a copy of the actual **Proposal and Request for A Planning Grant** which was submitted to the Educational Facilities Laboratory.)

TO: **Educational Facilities Laboratory**

FROM: **The Office of the Tulare County Superintendent of Schools**

RE: **Proposal and Request for Planning Grant**

TITLE: **SCICON Master Plan**

PROPOSAL

Financial assistance from the Educational Facilities Laboratories will provide the Tulare County Department of Education with funds for the planning of an Education Center at the County Schools-owned **SCICON** site. (**SCI**ence and **CON**servation).

These funds will enable the Tulare County Department of Education to secure the necessary technical and educational personnel needed for a multidisciplinary analysis. This will enable the Tulare County Department of Education to properly inventory, analyze, forecast, plan, and program the requirements for such a center. To this end, the County Department of Education proposes to bring together an experienced and closely coordinated team of educators, planners, architects, engineers and members of the community to carry out these studies.

SCICON

The **SCICON** School is geographically located in the lower piedmont of the Sierra Nevada and is approximately central to the school population it serves in Tulare and Kern Counties. The 65 acres of deeded property of the school is adjacent to the large cattle properties of the Gill family. To the east is the boundary of the Sequoia National Forest. The site of the school is the Bear Creek Valley, approximately eight miles from Springville, California. Much of the property in the area is being purchased or held for home sites or land speculation.

SCICON is eleven years old. It exists without tax support by law, except for the coordinating activities of the Tulare County Department of Education. Support for the school is primarily from participants' fees, gifts, and bequests.

The effort shown by the participating school districts and by the residents of both Kern and Tulare Counties is to establish and build the program has been both unique and outstanding. (See brochure "**SCICON** Unlimited".)

A recent summation of the Tulare County Schools ethnic composition indicates that 30.7% of the total student population is of Mexican and/or Negro background. (See report prepared by "Proteus" for the Spring 1968 meeting on Mexican-Americans at the Lamp-Liter Inn.)

THE PROBLEM

There is a need to develop a systems analysis and a master development program for an educational and service program in keeping with the SCICON objective of establishing a unique educational center.

It is the intent of the Tulare County Board of Education, the County Superintendent of Schools, and the **SCICON** Administrative Committee to provide and develop leadership to serve and stimulate creative effort to resolve the many pressing problems of the schools and community. Recent effort has succeeded in focusing national attention on the urgency of conserving our country's natural resources – human and otherwise.

To efficiently achieve the goals of the **SCICON** Educational Center, there must be a continued wide involvement of representative groups – from business, from labor, from the community, and from education. There must be flexibility in thinking. **This is a new concept of a facility which must be designed to meet the needs of a fast changing society.**

OBJECTIVES

The preparation of a long range development program for the Tulare County Department of Education's **SCICON** Education Center will involve a multidisciplinary approach unique to few organizations specializing in educational research and action today. To this end, the Tulare County Department of Education will bring together an experienced and closely coordinated team of experts to achieve the following objectives:

1) To examine the school and community needs in context with the planned facility.

2) To develop a master education program based on natural sciences, humanities, and behavioral sciences fulfilling the stated objectives of **SCICON**. (See Appendix I)

3) To conduct an intensive study of the logistics for use of land that is presently owned and that which is urgently needed.

4) To develop an adequate plan providing for needed programs today and flexible enough to accommodate future programs of tomorrow.

5) To develop priorities which will support direction to action.

6) To provide a generalized cost analysis of the development. These costs will be formulated in relation to the needed facilities, land acquisition, programs, and equipment.

7) To provide a guide for other agencies developing or modifying their educational service facilities.

PROCEDURES

The stages of the planning study will involve **SCICON** staff, County Department of Education personnel, participating school districts' staffs, members of the community, and consultants from specialized and technical fields. This group will address the following areas:

PHASE I

The first phase will investigate and analyze the following:

1) School and community needs.

2) Development of a master education program.

3) Survey the use of land presently owned and needed.

PHASE II

The second phase of the study will involve the development of requirements based on the research and analysis of data secured from the studies initiated in the first phase. This phase will be concerned with the following:

1) Finalization of education programs.

2) Site and facility requirements.

3) Analysis of generalized costs of the program.

PHASE III

The third phase will be directed toward the following:

1) Development of priorities of action.

2) Evaluation of the long range planning program.

3) Compiling a report for parties interested in similar programs.

4) The provision of a final report as required by the funding agency.

SECTION II

AN OVERVIEW OF PROGRAM, PHILOSOPHY AND FACILITIES

What is **SCICON**?

Philosophy of **SCICON**

Objectives of **SCICON**

Existing Program of **SCICON**

Existing Facilities of **SCICON**

Support for Present Operation of **SCICON**

SECTION II

WHAT IS SCICON?

SCICON, which currently designates the **Clemmie Gill School of Science and Conservation,** is a program of environmental education which provides for students opportunities to learn about science, conservation, and ecological relationships in nature's own classroom. The colloquial title, **SCICON,** designates both a school campus and an instructional program which enable students, primarily sixth graders from central California schools in Tulare and Kern Counties, to spend one week at the mountain campus, living in cabins and studying in the out of doors. Under the guidance of a permanent staff of **interpreters** who are on site, the children learn through studies of botany, zoology, ornithology, geology, and meteorology more about their natural environment and its ecological relationships, particularly as these relate to conservation of human and natural resources. Accompanied by their classroom teachers, more than three thousand children come annually from scores of schools throughout the two counties and from other locations. Several thousand more children make day trips to the school for studies of conservation and ecology, and additional hundreds of children and adults attend overnight and weekend sessions.

1. **SCICON** IS ADMINISTERED UNDER THE DIRECTION OF THE TULARE COUNTY DEPARTMENT OF EDUCATION BY THE DIRECTOR WHO COORDINATES ITS ACTIVITIES AND SUPERVISES ALL PHASES OF THE PROGRAM. HE IS A REGULAR MEMBER OF THE STAFF OF THE TULARE COUNTY DEPARTMENT OF EDUCATION. THE STAFF OF THE BUSINESS OFFICE OF THE TULARE DEPARTMENT OF EDUCATION SERVES AS BUSINESS ADVISERS AND ACTS AS CONTROLLER FOR ALL FUNDS.

2. A LARGE GROUP OF INTERESTED CITIZENS, INCLUDING LOCAL DISTRICT AND COUNTY BOARD OF EDUCATION MEMBERS, SCHOOL SUPERINTENDENTS AND PRINCIPALS, BUSINESSMEN, FARMERS, BANKERS, LAWYERS, EDITORS, PTA REPRESENTATIVES, LABOR UNION MEMBERS, REPRESENTATIVES OF GOVERNMENTAL RESOURCE AGENCIES, SERVICE CLUBS AND ORGANIZATIONS AND MEMBERS OF PHILANTHROPIC ORGANIZATIONS, COMPRISES AN ORGANIZATION WHICH IS KNOWN AS THE **SCICON ADMINISTRATIVE COMMITTEE,** WHICH IS, IN EFFECT, A **COMMITTEE OF CONCERN.** IT MEETS SEVERAL TIMES ANNUALLY, AND ONCE ANNUALLY IT ELECTS AN **EXECUTIVE BOARD** WHICH ACTS AS A BOARD OF CONTROL, AND WHICH, WITH THE SUPERINTENDENT, TULARE COUNTY DEPARTMENT OF EDUCATION, ESTABLISHES POLICY AND APPROVES THE BUDGET.

3. ANOTHER BODY, KNOWN AS **FRIENDS OF SCICON,** IS A CORPORATE ENTITY WHICH IS EMPOWERED TO ACCEPT FUNDS, BEQUESTS AND GIFTS ON BEHALF OF **SCICON.**

Location: The reader of this report is referred to the **Vicinity Map** which is to be found on the next page. As the map indicates, the campus is located approximately twenty-five miles to the northeast of Porterville, California. It is eight miles above the mountain village of Springville in the lower piedmont of the Sierra Nevada. The sixty-five acres which comprise the site are located on Bear Creek. To the east is the boundary of Sequoia National Forest; the other surrounding land is privately owned and is used for cattle grazing. The campus is located at an elevation of 2300 feet. The climate is mild, and the terrain is gently hilly.

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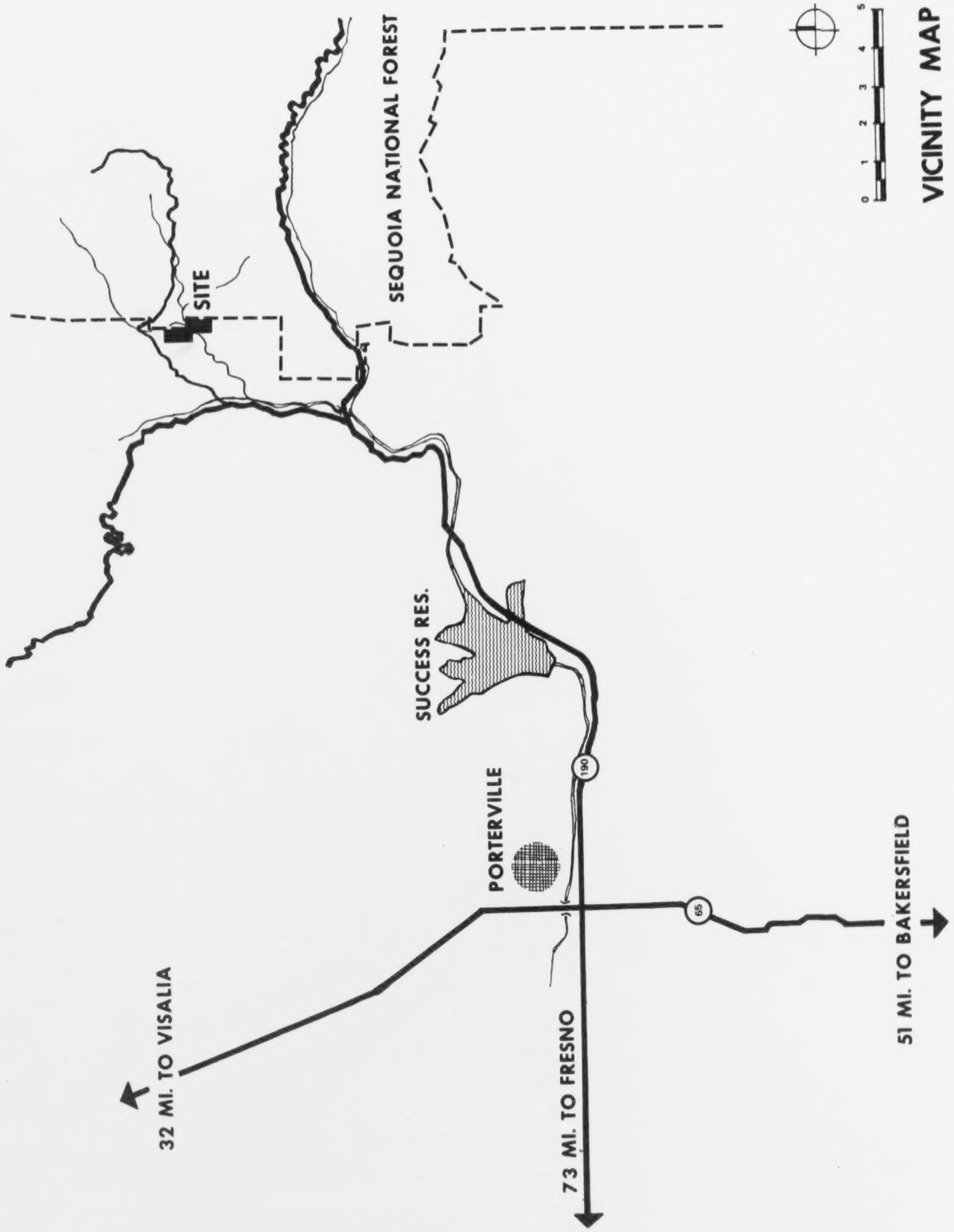
SITE
SEQUOIA NATIONAL FOREST
SUCCESS RES.
PORTERVILLE
190
65
4
32 MI. TO VISALIA
73 MI. TO FRESNO
51 MI. TO BAKERSFIELD
0 1 2 3 4 5 MI.

VICINITY MAP

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PHILOSOPHY OF SCICON

SCICON is a program which is deeply rooted in an optimistic faith in the worth of man; it is an expression of faith in his educability and perfectibility.

It believes that if man is given opportunities to understand the circumstances and alternatives which are available to him as part of the decision-making process, he has the ability and the willingness to consciously order and deliberately select patterns of behavior and ways of interaction which will enable him to survive and prosper in a natural environment which is always impersonal and often hostile to his needs and desires. Not only does it believe that man is capable of surviving but that he is capable of enriching his life and circumstances and of transmitting his cultural heritage more generously and splendidly than he himself was privileged to receive it. This credo of faith is predicated upon the belief that if man is educated to know the truth, he will speak it; if he is sensitized to beauty, he will serve it; if he learns to know goodness, he will manifest such knowledge in his daily relationships with other men and with nature.

Certainly all thoughtful and compassionate men these days are deeply concerned and troubled by the present estate of the human family in a world where, for rude and unlovely reasons, most of earth's people still live in misery, burdened by their ancient enemies of hunger, disease and ignorance, and existing in windowless houses of despair and on knees of pain.

YET IT IS THE NATURE OF MAN TO PLAN AND HOPE AND DREAM. HE DOES NOT SUCCUMB TO DESPAIR FOR LONG, AND EVEN IN DARKNESS, HE CONTINUES TO GROPE TOWARD THE LIGHT; IN HIS EMPTINESS, HE SEARCHES FOR FULFILLMENT. THIS HAS BEEN THE UNDERGIRDING FAITH WHICH NOW FOR TWO CENTURIES HAS SUSTAINED AMERICA'S NATIONAL LIFE AND PURPOSE.

It is the story of man upon this continent – opening up a dangerous and hostile land, clearing the forests, damming the rivers, and cultivating the soil. It is the story of man, battered and crushed by unfriendly elements, victimized by many evil and dangerous circumstances, experimenting with new and untried social, economic, political and religious systems, enslaving his fellow man, and turning away from that evil only to crystallize equally great evil for generations in the caste system of economic and social deprivation of those whose skins are dark and who stand outside the gates.

Americans – moving westward upon the continent; bringing desert lands into flowering, harnessing rivers, and moving mountains; using the power of the lightning and the sun to perform their work; tapping resources of boundless forests and bountiful soil and water and air to create systems of wealth which would have staggered the imaginations of the richest kings of antiquity. From all over this earth they came to build a new social order, men who were revived by hope and disciplined by adversity. They converged as relentless, conquering armies to build a new empire of farms and factories. They dreamed of a world where the backs of men were not bent beneath the awful load of physical labor which broke their bodies and crushed their spirits. They dared to dream dreams which no men had dreamed before of a human estate which would free men from their ancient servitude of poverty, hunger, repression and misery.

They created factories whose chimneys became the spires of a new religion. They sowed seeds enough to cover the limitless plains of the heartland – as far as the eye could see. They tunneled into the dark places of the earth and extracted treasure of silver and gold and iron and other treasures which would have dazzled King Midas.

The nation became a repository of power unparalleled in human civilization. It was a power which was used often with gentleness and compassion to build and create and heal, but too often it was used also less nobly and generously. Many men became bound by the myth that bigness and power were related to excellence; they became bound also by the myth that freedom and justice were not related to responsibility.

In America's search for the good life, there were too many who behaved as though they were no more than temporary sojourners in the land, and they violated the social contract mindlessly and cruelly. Now, over a billion acres of land which once was rich soil are gone, lost in the bottom of lakes and rivers and the seas. Rivers, once beautiful when they were quick with life, have become diseased arteries of death and decay. Even the mighty plains of the oceans and seas have been desecrated, poisoned by chemical and bacteriological wastes; their vital functions have been aborted and stilled; their generative capacities have been exhausted and their beauty has been violated.

Great forests, once proud, beautiful sentinels of the splendid, lonely sanctuary of the wilderness, have been transformed into hideous graveyards. Once peaceful lakes are filled with debris and sewage and silt. Once lovely hills are blackened with the offal of mines and stripped bare by bulldozers. Highways have become ugly alleys which travel through forests of billboards, those monstrous evidences of humanity's lowest esthetic appreciations. Cities with neither elegance nor charm languish in poisoned air which tortures screaming lungs and bursting hearts. Men grope for water at poisoned springs.

The tragic and ugly evidences of man's exploitation of earth's resources are everywhere, and they are chilling reminders of a day of reckoning which can no longer be postponed. Man rushes with frightening speed toward the ultimate destruction of life, for the ecological web is both strong and fragile, and even now it has been grievously ruptured and dangerously torn by man's ignorance and greed as he expends earth's capital and contaminates and despoils those very sources which sustain life.

NOW THE AWESOME CONCERN OF THOUGHTFUL MEN IS NOT ONLY THAT MAN, THE PROFLIGATE STEWARD OF EARTH'S RICHNESS, HAS WASTED RESOURCES AND POISONED HIS DWELLING PLACE, BUT THAT HE MAY HAVE ALREADY SET INTO MOTION IRREVERSIBLE CIRCUMSTANCES WHICH HE CAN NO LONGER CONTROL AND WHICH MAY CAUSE HIM TO PAY THE ULTIMATE AND AWFUL PRICE. IT HAS REACHED A POINT WHERE SCIENTISTS ALONE CAN NO LONGER MAKE DECISIONS CONCERNING HUMAN SURVIVAL, FOR THESE HAVE BECOME INCREASINGLY NOT SCIENTIFIC DECISIONS ALONE BUT MORAL DECISIONS CONCERNING MAN AND HIS STEWARDSHIP AND HIS OBLIGATIONS TO OTHER MEN AND PARTICULARLY TO THOSE YET UNBORN. THEY INVOLVE PROBLEMS AND CHOICES WHICH NOT ONLY SCIENTIFIC SPECIALISTS BUT ALSO COMMON MEN MUST CONSIDER, FOR UPON THE DECISIONS OF ORDINARY MEN AND UPON THEIR ORDERING OF PRIORITIES OF THE HUMAN AGENDA WILL HANG THE FINAL DECISIONS OF HUMAN SURVIVAL. YET SOCIETY AND EDUCATION HAVE NOT PREPARED ORDINARY MEN TO MAKE SUCH DECISIONS OBJECTIVELY AND COMPASSIONATELY.

A. **To help ordinary men, as well as those who are charged with making decisions at higher levels, develop knowledge and skills which will assist them in making such decisions more rationally and compassionately becomes daily a matter of more urgent concern. We hold it to be a mission of primacy at SCICON.**

B. **It is the mission of SCICON to do more, however, than just to strive toward an ecological relationship in which the basic needs of human life are satisfied.** The first concern, to be sure, must be for the restoration of a grievously damaged environment, for survival itself is at stake. But if it can be no more than this, it will truly be a Pyrrhic victory, for man needs more than just to survive, if his life is to be worth living. He may be well fed and sheltered; he may have abundant material security; he may have created systems of technology which provide physical comfort to his days. But if he knows no more than to feed himself or to indulge his creature instincts, then he is not man. If he does not know or care about that which is beautiful, if he cannot feel reverence for the grandeur of creation and the majesty of life, or if he cannot fulfill his own creative potentialities and satisfy those human aspirations and yearnings of which an ancient wideom spoke when it declared that "man does not live by bread alone," then his days are mean indeed. **It is the mission of SCICON to help men survive – and to know also that ancient sense of star-touched wonder which gives meaning and richness and beauty to their beings and touches their lives.**

C. **It is a primary commitment of SCICON that life's purposes consist of much more than knowing – they consist also of appreciating. Each must be free to appreciate and to care, according to whatever degree of sensitivity is possible for him, about the beauty of his world and the grandeur of his circumstances; and he must be free also to interpret his reactions and feelings, those deepest and most sensitive responses of his mind and heart, to the great forces and truths of life.** "It is through his art," Van Loon said, "that man talks back to God." But too often American culture has stifled such expression or has minimized its importance and dignity. Such feelings have too often been equated with weakness in our culture, and they have been regarded too often as somehow less worthy. **It is the commitment of SCICON to provide experiences and circumstances for all who come, young or old – and for both the artist and the less serious seeker – to express through whatever creative media they wish, their own seminal and bright, bold interpretations of the meaning of life.** Here they can sing for the joy of singing and to celebrate the exultation of the human condition, express with honesty their feelings and moods through art and the dance and the spoken word. Here, in an atmosphere of psychological freedom and safety, they can explore and experiment and create; here they can come to terms with their social, cultural, and biological environments.

D. **It is a place where man finds in the peacefulness of nature his own "center of stillness," so he may contemplate and reflect concerning his relationships with himself, with other men, and with his universe.** Here he may explore and test meanings and relationships and make his own individual statement concerning them. Here he may find opportunities for solitude, reflection and communion with the great forces which shape life –the friendliness of silence, the intimacy of green meadows and gentle hills, the presence of great mountains, the conversation of small streams, the inspiration of great trees, and the beauty of flowers. Here he can still look up at night and see stars, and here his thoughts can reach up and out to touch the face of God.

E. **It is a place where the lives of children and men are not hurried; here they may have opportunities once more to remember what they may have long since forgotten (or which they may never have known!), that, in the words of an ancient wisdom, "There is more time than life."**

Too many children – even those who are very young – may already by their early years have become impressed by the false value that somehow speed is to be equated with excellence and worth – and that only that has value which can be rapidly accomplished or quickly done. From infancy they are taught that the "race goes to the swiftest." It has been perceptively stated that too often ours is a culture which is impatient with that which matures slowly, whether beauty, art, or the fruits and flowers of the earth. We have even pressed our children too often to grow beyond their interests and natural development. **SCICON** is committed to the premise that such an emphasis does not do a service to children but rather that it harms them more often than not. The worth of human life is not measured by the speed or intensity with which it is lived but rather by its quality. At **SCICON**, people are encouraged to know and appreciate the peace and serenity of life which is not regulated by the sweeping red second hand of a clock or punctuated by the stridency of ringing bells. Here they may come to understand the wisdom of the ancient poet who sang: "Be still and know that I am God."

F. **SCICON is committed to exploring and enriching the quality of human relationships and understandings. It is a vehicle which strives to help children and men explore and test the various ways in which man communicates with his fellow man.** Here are many opportunities for human beings to live together, play together, work together, create together, and to engage in those social processes of interaction and communication which define the dimensions of man's involvement with man.

Here youth lives with those who are older in experience and years, and each learns from and teaches the other. Participants come to know and relate to those who are racially and ethnically different. Here children from socially and economically privileged circumstances live, eat, study, work, play and sleep with those who have much less of life's bounty and each shares in the common experiences of the other. Those of more limited intellectual capacities who walk slowly and with faltering footsteps are brought into daily relationships with those whose agile minds rove fast and far ahead into realms of thought where most of us can never go – and each benefits from such transactions. Children and adults who are "different" are valued for their uniqueness, and those who are ill or who have suffered find support and healing. Here they may interact with gentle and loving adults who care about them. **SCICON is a program which cares deeply about the circumstances and conditions of human relationships and behavior, and it seeks to contribute positively to the improvement and enrichment of such relationships and to open them up so that all who come may grow to know and care about and love each other.**

G. **SCICON is committed to the belief that man needs to relate to nature and the great animate and inanimate forces of the earth.** It recognizes man's important relationships with the land, for it holds that man needs more than just a world of crowded city streets, concrete sidewalks, congested houses, suburban sprawl, poisoned air, and all the other unlovely aspects of his increasingly dehumanized existence. Both children and adults need to discover once more those elemental sources which nourish life. They need to walk where they can feel the grass under their feet, to watch the lonely soaring of a hawk or friendly squirrels at play. They need, at least in a limited way, to understand how it once was in this land and how much we have lost. The hour is late indeed, but perhaps at least for some who come to this natural setting in the mountains, they may perceive, however dimly, something of the vision of Stephen Vincent Benet who wrote with poignancy and sadness concerning that almost lost America:

> "When Daniel Boone goes by at night
> The phantom deer arise.
> And all lost wild America
> Is burning in their eyes."

Objectives of Scicon

I. **To help all who are influenced by this program either directly or indirectly to develop greater knowledge, deepened awareness, and increased sensitivity and appreciation concerning man and his interrelationships with environment and its animate and inanimate forms and phenomena. In a planned context, it is anticipated that such understandings and knowledge will include the following concepts:** They are basic to curriculum development at **SCICON:**

1. Man lives in a universe which is part of a vast system of organized matter in time and space.
2. Man is related to an organizational structure of infinite smallness (the atom), but it is a structure which is similarly organized and built of identifiable materials as the large macrocosm of which he is also a part. There are balance, similarities, variety, order and unity in these structures and relationships, and man is part of them.
3. The earth, which is strategically located to sustain life, is composed of elements which are combined to form minerals which mixed to become rocks. These have been formed and shaped by forces which have changed them as land forms throughout eons of time.
4. As the atmosphere evolved, oceans formed; these, in turn, were controlled by great forces and conditions. Climates became established and soils and waters were formed and distributed to lay the foundations for ecology and to prepare the earth for life.
5. Life began upon the earth and developed with specific relationships and interdependencies, and more and more complex relationships occurred.
6. In response to environmental forces, changes and extinctions in life forms occurred to maintain ecosystems.
7. A balance of nature was established and continues to be maintained by a process which selects those organisms best adapted to fulfill certain positions or roles.
8. Catastrophic conditions in nature, such as fires or floods, destroy or interrupt stable ecosystems, and only gradually do they return to a stable condition.
9. Man emerged, and because of his special abilities, has been able to dominate the environment, extract information from it, conserve it for future use, and use it to predict. He is the most powerful creature that ever lived.
10. Man developed shelter, tools and weapons. He learned how to use fire and clothing and how to migrate and hunt. He domesticated animals and learned how to grow crops.
11. Man began to express himself creatively through art, music, architecture, invention and writing. He established systems of philosophy and religion. These form the base for human culture.
12. Man invented numbers and rules of numbers and mathematics was introduced into his organization of knowledge. It enabled him to better predict, design and think abstractly, and it assisted him in finding order in the universe.
13. Man discovered basic concepts of physics, upon which most technology and many understandings of the universe are based. He also developed other sciences and aesthetic disciplines. Today there exists a web of interrelationships among these sciences and aesthetic pursuits of man.
14. Because of the development of a technologically produced affluence and also of better health and nutritional factors, man has increased his numbers rapidly and has spread unchecked to all regions of the earth.
15. Technological factors, however, have not been able to keep pace with population growth, and already mankind is experiencing biological and emotional stresses which are resulting in radical departure in behavior patterns and cultural amenities.

16. In response to environmental pressures, man has placed unprecedented demands on his natural resources. The nonreplenishable resources are being used at an alarming rate, and irresponsible by-products and wastes are despoiling the total ecosystem at a rate beyond the compensatory powers of the chemical, biological and physical factors which comprise it.

17. Therefore, humanity's legacy to men of tomorrow can only be paltry and defiled if these trends are not halted or reversed. Those very factors of ecology, the need of which is shared by all living things, are being rapidly and irrevocably despoiled beyond tolerance for life.

II. **To structure studies related to man and his environmental interrelationships which are interdisciplinary and which emphasize at all times the unity of all living things with each other and with their environmental milieu. In planning and implementing such studies, all relevant information, methodologies, and conceptual systems of all related and appropriate disciplines will be utilized, including the following:**

1. **Studies of the Universe**
   Concepts and programs of astronomy.

2. **Studies of Matter**
   Matter as the building blocks of the universe, and its laws and functions.

3. **Physical Geology and Geomorphology**
   The earth as a planet; its formation and development.

4. **Meteorology and Physical Oceanography**
   Conditions of the earth as a foundation for life.

5. **Biochemistry**
   The basis and origin of life and modification of the environment.

6. **Evolution of Biological Systems**
   Those common to all forms of life; the establishment of energy relationships.

7. **Embryology, Anatomy, Pathology and Physiology**
   The origins and development of specific cells, tissues and organs to perform specialized functions.

8. **Historical Geology**
   Emphasis on time and processes involved in producing today's ecosystems and upon the origins of life forms; reemphasis of processes of evolution, extinction, pressure and change. Events leading to the evolution of man.

9. **Paleontology and Systematic Biology**
   Varieties, origins and orders of living things.

10. **Ecology, Evolution and Genetics**
    The main principles of ecology and evolution of the genetic scale; natural selection and population dynamics – balance and oscillation, ethnology.

11. **Ecological Succession**
    The processes involved in establishing stable, balanced communities; aquatic, terrestrial, alpine, meadow, woods, ocean, and others; interaction.

12. **Physical Anthropology**
    The evolution of man, his similarities and differences relative to other creatures and the probable pressures that existed to produce him; man's position of dominance.

13. **Archeology**
    The establishment of cultures and communities.

14. **Humanities**
The creative instincts of man; art, music, drama dance, literature, language, philosophy, religion.

15. **Mathematics**
A means of understanding and predicting

16. **Basic Psychology**
A means for man to understand himself and his behavior

17. **Physics**
Understanding time, matter, energy, motion and force

18. **Technology**
A process which contributes to the possibility of a high state of culture

19. **Interrelationships of the Sciences**
With emphasis on the application of technology

20. **Human Effects on Ecology — and its Implications for Human Behavior**
Influence and control man; the necessity for conservation; the precarious status of man.

21. **Responsibility**
The ethnical implications inherent in being man. The moral and ethical significance of it all.

III. **Included as coordinate objectives of SCICON are also the following:**

1. To study and conduct research into the nature and behavior of man as a creature which both affects and is affected by his environment and culture; to probe for consequences and causes of his behavior and to seek greater insights concerning the conflicts and drives for domination and aggression as mechanisms in an environment which he has modified and in which those ancient drives now too often are in conflict; to understand more clearly the nature of such conflicts and to search for more viable and creative solutions for them.

2. To explore the varied dimensions of human individuality, with particular emphasis upon those who are culturally, intellectually and socially nonstandard in their patterns of development and behavior; to devise strategies related to their adjustment and learning which will enable them to utilize their potentialities maximally, to help them learn to make those adjustments which are required for them to function in society and yet not lose their thrust of individuality; to explore also ways in which society can adjust to them and utilize most profitably their abilities and the products of their uniqueness and creativity.

3. To provide opportunities for cross-cultural exploration and interrelationships; to establish many situations in which children and adults of various cultures, social and ethnic backgrounds can live together in a variety of relationships so they may grow to know each other and gain greater understandings and appreciations of each other's life styles, folkways, value systems and beliefs; to provide also laboratory situations in which systematic observations and evaluations of such relationships and conditions can be made by trained scientists so such insights can be shared in ways which are socially and culturally useful; to provide conditions in which students of human behavior may find opportunities to study, under expert direction and guidance, such phenomena.

4. To explore ways in which human society can more intelligently order the conditions and circumstances of its existence with particular reference to such matters as problems of population distribution, urban planning, intergroup and interclass relationships, social services, health and nutritional services, resolution of social and economic tensions, communicational problems, and environmental deterioration; to collaborate with other social, scientific, educational and professional groups in both private and public sectors, serving as the primary agent in planning and conducting such studies and also as a resource agency and partner to other agencies and individuals who wish to utilize the facilities and expertise of the **SCICON** program.

5. To provide a setting and conditions in which participants at all levels of sophistication and interest can utilize the various creative arts, including music, dance, painting, sculpture, drama and literature, as vehicles for interpretation and expression; to encourage both neophytes and mature artists to create original forms of art and to interpret existing forms; to encourage, particularly, artists to relate their efforts and productions and interpretations to other disciplines and human undertakings and problems, and to involve them in social problems and projects such as preserving or upgrading environmental quality and beautification; to challenge them to use their art forms in helping men to live more harmoniously and happily together.

6. To explore continuously the nature of the teaching-learning process; to conceptualize and test new strategies for teaching and learning utilizing various and differentiated teacher-learner relationships and roles, the uses and functions of new and experimental instructional materials and equipment, the use of different and innovative physical facilities and modifications in time scheduling and organizational strategies and schemes for instruction; to experiment with and test new curricular designs and strategies, particularly those which emphasize greater integration of various disciplines and environmental education; to explore ways in which various learning theories can be unified and harmonized with practices; to create instructional situations which are truly laboratories for observation, field testing and experimentation.

7. To develop programs which will be concerned with exploring ways in which roles of primary social groups such as the family can be better defined and strengthened; to identify more clearly its role as a social institution and to probe for ways in which society can more effectively support its functioning; to experiment with primary family-type relationships ~~involving~~ surrogate-parent and child relationships and in which the extended community can function as a substitute for immediate family relationships.

8. To provide varied opportunities for participants to utilize education as a lifelong activity which stimulates men to be continuously involved in study, learning, and in the refinement of existing skills and the development of new ones, according to individual interests and abilities.

9. To enable participants to explore vocational implications and directions of various human activities and to provide meangingful and significant work experiences for them.

10. To provide facilities and programs and leadership to stimulate research on the environmental effects of various products and practices, both negative and positive; to educate as widely as possible concerning the implications of such findings and to collaborate as effectively as possible with all individuals and agencies in eliminating those products and practices which create environmental deterioration and ecological imbalance and in implementing positive programs and practices which preserve and enrich environmental quality.

11. To explore and define conditions, factors and circumstances which are related to human accountability and to train resource persons and leaders for society in matters related to man's role and responsible relationships with his natural and social environments. The unifying discipline will be human ecology.

12. To provide opportunities for men to know the solitude of wilderness places and quiet moments; to enable them to utilize such circumstances as fully as possible in their studies and explorations of ecological relationships under conditions which are as nearly natural as possible; to provide a setting and facilities where people may come for many purposes, including those which are not particularly related to the primary thrust of this place, but where they will have opportunities to become more knowledgeable and sensitive to its mission and for its concerns for human well being and survival. It is the mission of **SCICON** to help each one who comes here, whether child or adult, or casual visitor or serious seeker, to develop as much and as effectively as he can of what Menesini describes as **cognitive appreciations** (based upon factual information and knowledge) and **affective appreciations** based upon "impact" experiences which may be dramatic, exciting, significant or unforgettable experiences which affect the participants and make them more sensitive and prone to act in constructive and creative ways. The goal is the strengthening of ecological relationships and the beautification of the natural environment; the ultimate consequence is human survival.

EXISTING SCICON PROGRAM

The **SCICON** Program is designed to meet the previously stated objectives and to educate those who come as learners concerning the major ecological factors controlling erosion and formulation of soil; the life cycles of plants and animals in this life zone; common names and the interrelationships of plants and animals; and the beauty of nature and the job of perceiving it first-hand. Toward this end the following programs have been implemented :

1. **Interpreter Walks and Nature Exploration:**
   Two 2-hour walks each day (Tuesday, Wednesday, Thursday) covering six areas of concern in relation to the ecology of this area – plants, small animals and insects, bird study, life zones and ecological relationships of life forms.

2. **Soil Conservation:**
   Erosion control, ground cover – use and abuse of fire and water – trails, roads, fire cuts.

3. **Water Conservation:**
   Springs – geology of water as a mineral, watersheds, the creek – drainage basins, Soda Springs – minerals in solution, ground cover.

4. **Fire Prevention:**
   Brush clearance, control burns and replanting, effect of fire on water sheds, fire fighting facilities at **SCICON** – rules and regulations.

5. **Forest Manners and Procedures:**
   Fire and other special use permits, fire closure rules and seasons, proper methods of disposal of refuse in forest areas, study and practice of hiking and trail rules, building and extinguishing fires safely – indoors and outdoors.

6. **Social Relations:**
   Eating together, sharing the cabin with children from other schools, particpating in evening meetings, interacting with counselors, interpreters, and teachers, taking responsibility for custodial care of dining hall, cabins and restrooms.

7. **Health and Safety:**
   Personal care – cleanliness, nutrition, first aid, respect for group and personal safety rules, awareness of health and safety.

8. **Astronomy:**
   Use of the observatory and smaller telescopes and sky charts.

A typical day for a student spending the week at **SCICON** is as follows:

6:45 a.m.	Rising gong
7:00	Table setting gong
7:15	Breakfast, flag salute, morning group assignments, announcements, clean up tables.
8:00	Cabin clean-up – personal care
8:40	Morning walk with interpreter (in group of about 15) – 2 hours (Interpreters are our permanent staff of teachers and/or naturalists who are expert in some area of our science and conservation program)
10:45	Class meets with home teacher – 1 hour
11:45	Table setting
12:00 noon	Lunch– outdoors, weather permitting

12:45 P.M.	Quiet time – rest in cabins
2:00	Afternoon walk with interpreter
4:00	Class meets with home teacher – or with special interest group.
5:00	In cabin with counselor; prepare for supper
5:15	Table setting gong
5:30	Supper
7:00 – 8:15	Evening activity Observatory; night hike; group singing; folk games; movie or slide presentation.
9:30	Lights out

Existing Facilities at SCICON

Presently the **SCICON** campus exists on a site which consists of sixty-five acres of land in the Sierra Nevada at an altitude of 2,300 feet.

Existing buildings and facilities include:

John Muir Lodge – A dual-purpose dining and assembly hall. It has a seating capacity of three hundred. It includes a kitchen, food storage areas and restrooms.

Cabins – (10) to accommodate 100 children.

Exeter Staff House – to accommodate 15 teachers and interpreters. This facility is also used for small weekend conferences.

Serendipity House – The building houses the office, Director's quarters, cook's quarters, and it has a commons area which can seat twenty persons. It includes also a storage room, photographic darkroom and restrooms.

Toilet and Shower Unit – Six stall toilets, two shower rooms and sinks.

Sewage Disposal Unit – Bacteriological innoculation redwood sponge system.

Water System – from natural springs source – contained in water storage tanks, ultraviolet purification systems.

Observatory – accommodates ten observers.

Barbecue and Picnic Area

Temporary facilities include: shower unit, outhouses, storage sheds and tool house.

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Support For Present Operations of SCICON

SCICON currently exists without tax support except for the coordinating functions of the Tulare County Department of Education. Income from contracting classes with local school districts and with other groups for weekend conferences are the major sources of support. Gifts and bequests provide additional support.

SCICON was built by community effort. The participating school districts and other public and private agencies and individuals have provided at least $250,000 in cash contributions and volunteer labor toward construction of facilities and site improvement. This cooperative spirit continues. A multi-purpose building is presently under construction, being financed by the community of Porterville.

Student fees consisting of $25.00 for the week-long experience for each student are assessed. A fee of 50 cents per child is assessed for day trips. These monies provide support for basic operational costs.

SECTION III

FORMATION OF TASK FORCE AND DEVELOPMENT OF MASTER PLAN

The Charge Given to the Task Force

Organization and Work of the Task Force

Task Force Committee Findings

1. Administration Center Committee
2. Environmental Center Committee
    - a. The Clemmie Gill School
    - b. The Listening Hill Village
    - c. The Max Cochran Laboratory School
    - d. The Environmental Research Laboratory
    - e. The Astrophysical Center Facility
    - f. The Facility for Research of Human Behavior

3. The Humanities Center
4. The Conference and Student Center

A Statement of Goals for the Planning Committees

From the studies of the various planning committees which were convened under terms of the Planning Grant mandate came recommendations for program direction and planning development. These recommendations were incorporated into several master educational goals which are intended to express the mission for **SCICON** and its development in the years ahead. These major goals are summarized as follows:

A. To coordinate and facilitate a multidisciplinary and interdisciplinary approach to environmental education which integrates the natural sciences, behavioral sciences and humanities into a unified approach to problem solving and learning.

1. To provide knowledge which is necessary in helping the learner to better understand and adjust to the world in which he lives.

2. To help the learner to better understand the major human activities in which he engages in meeting his basic human needs; to help him grow in his understanding and appreciation of his human and natural environment, the ecosystems of the earth, and man's interdependence with that environment.

3. To provide both direct and vicarious experiences which will better acquaint the learner with the natural resources of the world, the ways in which they are processed, and the need for their wise use.

4. To help the learner understand the necessity for control of the environment and for its qualitative restoration where it has been exploited or violated.

5. To provide opportunities for learners to seek and enjoy the beauties of nature in its infinite variations.

6. To provide opportunities for aesthetic explorations and creative expression utilizing varied media such as art, literature, music and dance; to enable participants to explore the potentialities of the creative act on many levels of expression.

7. To enable individuals and groups to develop more meaningful and effective levels of group process and participation in interpersonal situations of many kinds; to establish more effective opportunities for communication and interaction among people.

8. To provide individuals with a climate of acceptance and appreciation of their own unique worth to the end that they can attain more adequate self realization as individuals and group members.

B. To establish, under a unique administrative system, various centers and facilities for research and study and to facilitate the efforts and activities of those who come to study, meditate, and create. Specifically, these centers and facilities are as follows:

1. Administrative-Operational Center
2. Environmental Education Center
   a. Clemmie Gill School
   b. Listening Hill Village
   c. Astrophysical Facility
   d. Max Cochran Laboratory School
   e. Environmental Research Laboratory
   f. Facility for the Research of Human Behavior
3. Humanities Center
4. Conference and Student Center

C. To provide an integrated program of learning:
1. For students at elementary and secondary levels, using both traditional and innovative approaches;
2. For college and university levels through provisions for independent study and research and through a system of internships and fellowships in various disciplines.
3. For graduate and post graduate students through opportunities for discovery and research;
4. For society in general through publications, seminars and conferences.

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TASK FORCE COMMITTEE ACTIVITIES

The Task Force Committee, in order to accomplish its objectives, created six subcommittees as follows:

1. Administrative Operational Center
2. Humanities Center
3. Conference Center
4. Environmental Education Center
5. Behavioral Sciences Center
6. Astro Physical Laboratory Center

Appointed to serve on each subcommittee were educators, other professionals, and lay people; each subcommittee had a chairman, and it was his responsibility to coordinate its activities and provide leadership for its work. Each subcommittee was given a charge to study, conduct research, and formulate recommendations concerning its ares of responsibility. Each subcommittee met frequently over a period of six months, often traveling to visit other relevant programs or facilities and consulting with experts in its field of concern.

A conference of all participants was called in April, 1969, at St. Anthony's Retreat House, Three Rivers, California, and at that conference each subcommittee made its report.

Upon review by the Control Committee, the number of **centers** was reduced, with some being subsumed as **facilities** of the Administrative Center, Environmental Center, Humanities Center and the Conference Center. These modifications were made for purposes of administrative convenience when it became apparent that these were more natural relationships and projections than those which had been proposed initially.

Summary statements of the observations, findings and recommendations of the various subcommittees follow:

THE ADMINISTRATIVE–OPERATIONAL CENTER

The charge given to the Administrative-Operational Center Subcommittee was that it should consider the nature of administrative organization and facilities which should be established to operate, maintain and otherwise be responsible for the physical facilities and program operations of the campus.

It was to consider what kind of center should be established to care for matters related to personnel administration, scheduling, building and site development, plant and site maintenance, security, operations, public information and relations, immediate and long-range planning, and budgets and fiscal affairs. It was also directed to study what should be the relationship of such a center in providing services of coordination and leadership for personnel and programs of the other centers at **SCICON** in helping them move toward fulfillment of the **SCICON** philosophy and the attainment of its objectives.

The subcommittee met on many occasions and it consulted with Earl Burrows, director, the Center for the Study of the Person, and with Roma Philbrook, manager, Asilomar Conference Grounds. The subcommittee visited Asilomar to observe the administration and operations of that facility. Dr. Eugene Howard, president, International Learning Corporation, also served as a consultant to the subcommittee. Several members visited Prescott College, Prescott, Arizona, to observe and inquire in depth concerning its unique interdisciplinary system of education and its administrative and counseling procedures. The University of California at Santa Cruz was also visited to observe its unique plan for building facilities and landscaping, and to inquire concerning its instructional and counseling programs.

THE ENVIRONMENTAL CENTER

The Environmental Center Subcommittee was given the charge that it must accept responsibility for developing a resource center and work area which would facilitate the furthering of the postulate that "men must accept the moral responsibility for providing a sanitive environment for their children." It was to explore ways to increase human awareness, knowledge, understanding and appreciation of the environment, both natural and social, so that man might continue to exist in an ecologically balanced system which is maximally supportive of him. The center and its programs and activities must reflect a generous and optimistic expression of commitment to the dignity of man and to the concept that human life — and indeed all life — is worthy of preservation and development.

The subcommittee was asked to consider what services such a concept should provide and what programs it mandated; it was asked also to make recommendations concerning the nature of the buildings and facilities which are needed to realize such program objectives and activities.

Members of the Environmental Center Subcommittee were teachers from Tulare and Kern Counties who were involved in the **SCICON** program. They met at various times to consider their charge and to conduct their studies. Serving as major consultants to the subcommittee were Dr. Paul Brandwein, author of the California adapted science textbooks, Dr. Mario Menesini, director, National Environmental Educational Development Program, and Dr. Donald MacDonald, associate director, Oregon Museum of Science and Industry. They helped the subcommittee develop a conceptual approach to environmental studies, and they assisted also in developing logistics for a systems analysis approach to the problem at hand.

The subcommittee made studies of grade level activities and programs to correspond with identified concepts related to studies of environmental education, and it included also recommendations for specific facilities and equipment which the subcommittee members considered necessary to implement such a program.

Central to the subcommittee's concerns were the Clemmie Gill School, Listening Hill Village, the Max Cochran Laboratory School, the Astrophysical Laboratory Facility, the Facility for the Research of Human Behavior and the Environmental Research Laboratory, all of which are basic to an integrated understanding of man in his environment.

THE ASTROPHYSICAL LABORATORY FACILITY

The Astrophysical Laboratory Facility subcommittee was charged with planning a program for astronomical study and celestial exploration. It was asked to consider the circumstances under which the heavens can be explored and studied at **SCICON** through the use of planetaria and observatories. Its charge was a dual one: (1) to delineate a program of astronomical studies which will serve the interests and needs of both students and non-student groups which come here to learn more about astronomy, and (2) to consider also the kinds of research activities for which such facilities may and should cater. The study group was asked to specify what tools and facilities such a laboratory should have to perform its multifaceted functions.

The subcommittee membership included Dr. Walter Lorenz, astronomer, and Robert Taylor, director, Kingsburg Unified School District observatory, and Arthur Pursell, president, Tulare County Astronomical Society. A major consultant to the subcommittee was Dr. Donald MacDonald, associate director, Oregon Museum of Science and Industry.

The comprehensive and technical report which was submitted by this subcommittee included interpretations, diagrams and pictures pertaining to the astrophysical program and facilities which it recommended be made available at this site to serve the needs of **SCICON**. A major recommendation of the subcommittee was that the Astrophysical Laboratory not be built or operated as an independent center as originally conceptualized but that it be designated as a **facility** which would be a subsystem of the **Environmental Center**.

THE FACILITY FOR THE RESEARCH OF HUMAN BEHAVIOR

The **Facility for the Research of Human Behavior** committee was originally established as the Behavioral Sciences Center subcommittee. Subsequently it was decided that this **center** should be changed to a **facility** and its functions should be subsumed under the **Environmental Education Center.** It is within the context of that revised interpretation that this report is made.

The charge made to the study subcommittee was that it was to study the needs and specifications of such a facility at **SCICON**; it was to be a facility which would be concerned with teaching, demonstration and research related to human behavior in its many manifestations. Its studies were to be carried out with allegiance to the concept that man is quite capable of understanding and deliberately shaping his environment and modifying his life styles and intelligently and objectively ordering his destiny if he has adequate access to relevant data which enable him to understand the alternatives for action which are available to him.

The committee's charge was to conduct studies and make recommendations for the development of facilities and programs which would serve the needs of scientists who would come to study human behavior in its various manifestations, including interpersonal and intergroup relationships, manifestations of crime and delinquency, racial and ethnic tensions, human motivations, phenomena of learning, studies of intelligence in its various aspects, including creativity, and whatever other aspects of human behavior are relevant. It was to be a facility where behavioral scientists would work and where they could engage in studies and dialogue also with others, including fellow scientists and humanists, most particularly, who also share an interest and involvement in knowing more about man and his behavior in intellectual, emotional and social terms.

The committee met on many occasions to consider its problem; input data were sought from school counselors and guidance specialists and from psychologists and other mental health specialists, including those whose major concern is with deviant or non-standard behavior. Members of the study committee included representatives of the PTA, the Tulare County Crisis Intervention and Suicide Prevention Bureau, Tulare County Mental Health Clinic, Tulare County Department of Education, Tulare County Board of Education, and staff members from College of the Sequoias, the Kings View Hospital, and **SCICON**.

The committee's final report included recommendations for development of program and facilities which will support integrated activities involving functions of research, instruction and demonstration and which emphasize interdisciplinary approaches.

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THE HUMANITIES CENTER

The Humanities Center subcommittee was charged with planning programs and facilities related to a concept of "**dedication to the wise use and creative development of all those material and human resources which sustain human life and fill it with beauty and grandeur.**"

The subcommittee was charged to consider carefully the many disciplines and activities through which man expresses his creative urges and makes his individual statements concerning the nature of life and his relationship to his world, himself, his fellowmen, and his God; the committee was further charged with examining as thoughtfully and reflectively as possible the vehicles with which man expresses his concepts and understandings of goodness and beauty and truth – most specifically, his music, art, drama, literature, dance, philosophy and religion, and to consider ways in which proper facilities and relevant programs at **SCICON** could be provided to enable both serious artists and less serious seekers to come to make their own individual statements through many media and forms of expression. Especially was the committee urged to consider ways and means whereby the humanities might work in closer collaboration with scholars and scientists and seekers from other disciplines, particularly with those from the behavioral sciences.

The study subcommittee was composed of teachers, writers, artists, and musicians. It met frequently to discuss its charge and to explore ways of implementing a program and providing facilities which are required to make relevant the contribution of the humanities with man as the center and the purpose of it all. The committee visited the White Oaks Theater in Carmel Valley, also Idylwild and Tanglewood. They interviewed administrators and artists involved in those programs; they secured photographs of those facilities and also other information. The detailed report of this subcommittee includes a statement of needs that such a center should serve; it includes recommendations for required facilities and suggested programs; it includes also suggestions for staffing and for interrelating its activities with those of other centers.

THE CONFERENCE AND STUDENT CENTER

The Conference and Student Center subcommittee was charged with making studies and presenting recommendations concerning the establishment of a Conference Center to serve the needs of many organizations and groups which might wish to avail themselves of the facilities and services which such a center could provide in the beautiful mountain setting of **SCICON**. The committee was asked to consider in its planning and recommendations a center and services and facilities which would cater for many organizations and groups of varying sizes and purposes which might wish to schedule conferences and programs at that location. It would be a facility which could provide a stage and setting for many professional meetings of educators and other scholarly groups which might wish to use if for varying periods of time; it would be available to any organization which wished to make use of its services and resources for whatever legitmate purposes it might have.

The study subcommittee included teachers, school administrators, representatives of labor unions, the PTA, the Tulare County Board of Education, and the Tulare County planner. The group met on several occasions, and it visited the Asilomar Conference Grounds to inspect its facilities and operations and to interview Mrs. Roma Philbrook, manager of Asilomar. Its final report includes recommendations for a Conference Center which is projected to serve many professional and lay groups as well as other centers of **SCICON**. After the subcommittee's recommendations were received, the Control Committee enlarged the concept for the Conference Center to include a Student Center which would provide facilities and services for student groups at minimal cost.

THE ADMINISTRATIVE–OPERATIONAL CENTER

The report of the Administrative-Operational Center subcommittee was quite explicit in suggesting that the Administrative-Operational Center is to be the heart and nerve center of the campus. It is to be the center for all activities related to general administration of **SCICON**, and it will house not only the chief administrative functions of the school but it will also be the actual location at which the chief administrative officer, the president of **SCICON**, has his home. Although all top level functions of administration will emanate from this location, some subsystems may not actually be physically housed at this site but will be located, as appropriate, at the other centers on campus.

IT WILL BE THE FUNCTION OF THIS CENTER TO BE RESPONSIBLE FOR EVERY ASPECT OF CAMPUS OPERATIONS. EITHER THROUGH ASSUMING DIRECT RESPONSIBILITY FOR SUCH OPERATIONS OR BY DELEGATING THEM TO SUBSYSTEMS OF ADMINISTRATION. Among others, it will have such functions as the following:

1. To maintain and secure all facilities and equipment of the school and to maintain a system of inventory control over all assets and property on the campus.

2. To maintain and develop systems of communication at the campus, including trails and roads, provisions for vehicular transportation, closed circuit television systems, and radio and telephonic communication involving external and internal systems.

3. To maintain systems of utilities, including provisions for all centers at the campus, and to develop master plans for maintenance and expansion of such systems, as indicated by needs.

4. To provide systems of fire protection and custodial security for all facilities and residents at the campus.

5. To coordinate purchasing services for necessary supplies and provisions including foods, and to provide for their distribution to the various facilities and centers as required; to supervise the operation of service facilities such as dining halls and cafeterias at the various centers and to establish the policies according to which they function.

6. To provide laundry services or facilities as needed for the various centers; to provide other needed services of sanitation, including waste disposal.

7. To provide for distribution of mail.

8. To be responsible for fiscal management, including budget development and management, purchasing, finanacial records, and reports related to all aspects of the program and operations.

9. To operate all computer services on campus, including those performed at the Administrative Operational Center and at the various subcenters; provide facilities and services for data storage and retrieval for all specialized functions and programs on campus.

10. To initiate and coordinate long-range programs of planning for the campus, including site development, planning, and acquisition of buildings, facilities, equipment and also for program development.

11. To provide leadership for discovering ways and means of securing financial support for the program and for campus development from various public and private agencies and individuals.

12. To coordinate and implement programs of public relations and public information, including press and other mass media relations, preparation and distribution of brochures and other descriptive materials, correspondence, films, lecturers, and related matters.

13. To assume responsibility for personnel services, including selection, employment, supervision, and evaluation of personnel as indicated by established policies and in appropriate relationships with the various needs of the centers.

14. To provide for health and emergency first aid services at the campus, including the operation of an infirmary and first aid and nursing stations at the various sites.

15. To establish contact with all prospective visitors to the campus; to schedule their use of facilities on campus; to provide reception for them upon arrival and to provide whatever services and facilities are indicated to insure their comfort and well-being.
16. To assist the centers and facilities in coordinating the use of their resources and personnel in whatever ways are possible to maximize their contributions to the overall program, particularly in situations which involve interdisciplinary and intercenter involvement.
17. To serve as the coordinating agency for policy making at various levels of administration and for implementing and administering such policies, once they have been promulgated.

The major concern of this center will be with the dynamics of operation and the functions of leadership. Ultimately, the only justification for this center will be that its existence and activities will facilitate maximal and versatile utilization of all of the other centers. It is to be a coordinating and implementing and planning agency, one which provides maximum support for all current and projected programs and activities of the centers. In the final analysis, this is its only reason for existing.

This center will function as an instrument of democratic process. General policies and regulations will be established by the SCICON Board of Directors, and such policies will be implemented by the chief executive who will be designated as the president of SCICON, and by his assistants. Personnel from each center will work together and with the center staff to confer and cooperate in matters related to campus operations and programs, particularly in those programs and activities which are of an interdisciplinary nature. Personnel from all centers will serve in advisory capacities to this center staff.

An important responsibility of the Administrative Center will be one related to counseling and guidance. Persons who apply to any of the centers for admission to program or research activities will be interviewed by an administrative center team and counseled concerning the nature and extent of their involvement. Such counseling would enable the new participant to be scheduled into programs, courses, seminars, tutorials, research, or independent study which meet his needs and interests while he is on campus; it will enable the school also to take advantage of his abilities and skills while he is on campus.

Another important role of the Administrative Center will be to schedule work assignments for everyone on campus. It is a commitment of the **SCICON** program that all who are involved in any of the programs shall also participate in various other aspects of the life of the campus, including the performance of physical labor and the more mundane duties of the school. Basic to the learning process is doing; basic to environmental education is a cognitive and sensory awareness of one's physical environment and the interdependence of all who live within that environment, including one's own responsibilities for the sanitive maintenance of that environment. Physical involvement with a real world — in effect, seeing to it that one's own immediate surroundings are clean and safe and comfortable — makes education relevant in a dynamic way, and this is a commitment of the **SCICON** program. Requiring everyone — administrators, specialists, and students, both young and old, to participate in maintenance and housekeeping chores will help to prevent "academitis" and the kind of alienation among people which too often is the consequence of living lives which are too highly specialized. By insisting that all paricipate in processes of living and learning, it is hoped that such alienation will be minimized, and a whole new approach to living and learning can be realized.

Following are some suggestions which were made by the planning subcommittee for facilities which are needed at the Administrative-Operational Center: (Please see **Section IV, Educational Specifications** concerning more specific details)

1. Main administration building
2. Maintenance building and corporation yard
3. Reception center
   Security Entrance Station
4. Nurse's facility and infirmary
5. Central library and museum
6. The president's home
7. Staff housing
8. Parking facilities
9. Others

THE ENVIRONMENTAL CENTER

The Environmental Center designates a constellation of facilities which will be mostly clustered around the site of the presently existing Clemmie Gill School of Science and Conservation. Projected as satellite facilities of the **Environmental Center,** in addition to the **Clemmie Gill School of Science and Conservation** which will continue to serve children who come to the site to study, will be **Listening Hill Village,** the **Max Cochran Laboratory School,** the **Astrophysical Laboratory Facility,** the **Facility for Research of Human Behavior,** and the **Environmental Research Laboratory.** These several facilities are designed to meet the needs of all age levels in areas of study and research which are vital to an integrated and unified understanding of man in relationship to his environment.

> **IT WILL BE THE PURPOSE AND OBJECTIVE OF THE ENVIRONMENTAL CENTER AND OF ITS ANCILLARY UNITS TO INCREASE HUMAN AWARENESS, KNOWLEDGE, UNDERSTANDING AND APPRECIATION OF THE ENVIRONMENT, BOTH LIVING AND INANIMATE, IN WAYS AND DIRECTIONS WHICH NOT ONLY MAKE SUCH ACQUISITIONS OF KNOWLEDGE, UNDERSTANDINGS AND APPRECIATIONS RELEVANT TO EACH INDIVIDUAL BUT TO ASSIST HIM ALSO IN DEVELOPING A SYSTEM OF VALUES RELATED TO A HUMANISTIC AND ETHICAL INVOLVEMENT AS MAN.**

The Environmental Center will be concerned with studies of the natural environment, to be sure, particularly through such vehicles as the Clemmie Gill School of Science and Conservation and the Astrophysical Laboratory Facility. But more then this, it will find its direction and its ethical purpose from an awareness of the great and basic foundational concepts which sustain the human family and which are such urgent concerns of all those scholars and scientists and humanists who would conserve man and insure his continuity and welfare as a living species upon the earth.

> The Environmental Center will cater to those activities of education and research which are concerned with the best understandings of man and how he behaves and learns; it will be concerned with understanding better the nature of the cultural systems and artifacts which he creates and uses, and the societies which he orders; it will be concerned with his intellectual and emotional development and with the conditions which maximize or abort those potentialities; it will probe constantly for deeper insights into the nature of his creative and aesthetic impulses and potentialities; it will seek also to understand more adequately his commitment and allegiance to value systems and moral codes – how these are formulated, how they affect his behavior as a member of the human family and as a sojourner upon the earth.

It is appropriate, indeed essential, that the major emphasis and thrust of the Environmental Center's activities should be concerned with education and learning and motivation and adjustment and behavior, for these are crucial ones on the human agenda. In these days of deepening social crises, so many of man's structured and ordered institutions appear unable to adjust to or find solutions for many complex social problems and challenges which daily appear more menacing and challenging. Traditional systems of education fall into that category. They are urged to participate in the raising up of a generation of citizens who are wise enough and humane enough to respond positively and generously to the challenges which confront society. They are urged to create educational programs which will produce human beings who are socially and politically creative enough to raise men, including many millions in America, from their knees of pain and to assist them toward the attainment of those creative potentialities which lie slumbering within them. They are importuned to find ways of helping their fellow human beings become socially and politically creative enough to live at peace with themselves and with all the people of the world. But such insights continue to elude us, and mankind continues too often to grope through the darkened alleyways of life, too often filled with hate and hurting, and too many times incapable of actualizing his potentialities as man. It is to assist him in that quest that the Environmental Center and its facilities will be dedicated.

THE CLEMMIE GILL SCHOOL OF SCIENCE AND CONSERVATION

Always destined to remain as the living heart of SCICON will be the institution which is colloquially designated as the Clemmie Gill School of Science and Conservation, for it was this little school in its earliest and modest beginnings which first incorporated the concept and spirit of SCICON. It was with the little school that the dream was born and found its first substantive form. In years to come, **SCICON** will grow around the little school and physically it may almost be engulfed by other facilities and programs, but its functions will never be reduced in importance and its contributions to environmental education will never be diminished. Thousands of children and adults have benefited from its programs and services and tens of thousands more will do so in years to come. **It is projected to continue as the primary teaching vehicle for making field experiences in science and conservation education available to elementary and secondary students.** Here they will live and work and play and study in a natural environment and use nature's own laboratory for learning. It is and will continue to be an institution and a program which provides extended experiences (such as the currently operational one week program for sixth grade children) in science and conservation education and also shorter programs of a specialized nature (such as day trips or programs) for both adults and children.

Indeed it was no accidental happening or incidental circumstance that SICON in its original inception was the Clemmie Gill School of Science and Conservation, and its importance and significance in coming years will become not less but greater, for the functions which it serves must continue to be served in expanded and enriched circumstances.

A functioning campus already exists at the Clemmie Gill School with many facilities for living and study, including housing for children, some housing for staff, showers and lavatories, and a large multipurpose assembly hall-lodge-cafeteria facility which includes a kitchen (John Muir Lodge).

It is important at this stage to complete the master plan for this campus by adding new structures and enlarging existing ones as needed (see **Section IV, Educational Specifications** for details). Basically, what is required is as follows:

1. Library	a small library for specialized children's collections is needed; it should include also a section for adult professional books and periodicals. It should have a reading room which will accommodate 60 readers, a small conference room for staff meetings or individual study, and a combination office-work room.
2. Office and Lounge	No administrative unit presently exists at this center. A small office for the principal, with an adjoining office for the secretary, is needed. The suite should also include space for a workroom, supply room, and a small staff lounge. This suite should be incorporated into the John Muir Lodge.
3. Bakery and Deep Freeze	The kitchen facilities of John Muir Lodge are complete, but a bakery and a deep freeze are needed.
4. Dispensary	A small dispensary with first aid facilities and supplies for the nurse should be provided.
5. Administrators' Houses	Two houses, one for the principal of the Clemmie Gill School and one for the director of the Environmental Center, should be built at this site.
6. Exeter House	This facility is now partially complete and serves as a staff house and guest house. It should be completed as quickly as possible.
7. Village Chiefs' Quarters	Two small units are needed as housing for the Village Chiefs (head counselors). These small and modest facilities, to be located in the two student housing areas, are needed to provide some privacy for the counselors who live on-site with the children.
8. Quarters for Interns and Guests	Additional housing is needed for the student interns and for guests who are on campus to visit programs and observe classes. Specifications are given in Section IV.

9. Ramadas	These are roofed outdoor classrooms.
10. Trail Shelters	Primitive facilities to provide shelter from the sun and rain for students on trail walks.
11. Outdoor Campfire Amphitheatres	For evening programs, lectures, and musical events.
12. Lath House	
13. Garden House Ramada	
14. Bus Loading Platform	For passengers and baggage
15. Open Glade Area	
16. Life Science Building	
17. Research Workroom	To be part of the Life Science Building
18. Museum	Also to be part of the Life Science Building. It will house and display permanent and temporary collections of interest to children.
19. Swimming Pool	

THE ENVIRONMENTAL RESEARCH LABORATORY

The Environmental Research Laboratory is projected as a facility which will implement the efforts of many individuals and groups which come to SCICON to conduct studies and do research concerning ecological and environmental problems. It will be available to the resident and visiting staffs of SCICON for their studies and activities. Certainly there will be many ongoing research, demonstration and educational activities which will utilize this facility.

It will be available also to secondary school and college students who come to SCICON for class projects and independent studies. This will be a resource where outstanding young students may come to work as interns and assistants under the supervision and patronage of outstanding scientists and researchers who are involved in their own studies but who are willing to share their expertise with serious young students in such relationships. In that sense, the Environmental Research Laboratory will have implications for prevocational exploration and possible career direction for young people.

It is entirely a natural and appropriate relationship that the Environmental Research Laboratory should be an ancillary facility of the Environmental Center, for this is the facility of SCICON which is most directly concerned wtih securing and collecting scientific information and data which are sorely needed in studies of the immediate environment of the school, as well as research findings which have a wider relevance to the larger scientific community. Such research may be purely theoretical to provide more information and data which have no immediate application, but more often, it will be applied research related to pressing problems of conservation and ecology, such as effects of overgrazing, controlled burns, erosion, stream improvement, plant diseases and pathologies, animal populations, the use of specialized plant varieties, and many other related topics. It is anticipated that research often will be conducted cooperatively with other public and private agencies such as the U.S. Soil Conservation Service, the U.S. Forest Service, the U.S. Weather Bureau, University of California Agricultural Extension Service, Fresno State College, and other regional institutions and agencies. Private and public agencies and foundations also will collaborate with the Environmental Center in conducting joint studies and in cosponsoring research scholars and fellows who will use these facilities; it is anticipated that one of its valuable services will be in the publication of such research studies and their distribution to interested and concerned agencies.

Among the facilities and equipment which will be needed at the Environmental Research Laboratory are the following:

1. A large open-space building with several specialized laboratories for such purposes as soil chemistry, and botanical studies. (See **Section IV; Educational Specifications,** for details).
   These laboratories will need to be supplied with specialized equipment for performing many kinds of experimentation and research. This building will also need to contain a classroom for lectures and demonstrations, staff offices, and a small specialized library-conference room facility.

2. Green House

3. Lath House

4. Shop

5. Equipment Storage Area

6. Outdoor Test Plots

The laboratory will need to have available for its use 2 acres of land.

LISTENING HILL VILLAGE

Listening Hill Village should be developed as quickly as possible as an **extension of the campus of the Environmental Center.** It is to be located above the present Clemmie Gill School of Science and Conservation, and while the Environmental Center programs and staff will make extensive use of its facilities, it is not actually a facility which will be used exclusively by that center. Such centers as the Humanities Center, for example, will make quite extensive use of the Listening Hill Village also. It will be operated by and under the general supervision of the Environmental Center and will be considered a unit of its already existing campus. It will be an additional facility which almost duplicates the one which already exists, with some modifications to facilitate some specialized uses (such as those of musical organizations and groups which might wish to have summer music camps, for example.)

The following facilities are projected in the master plan for Listening Hill Village (see **Section IV – Educational Specifications,** for details):

1. **Student Housing**	Cabin type – identical to the village cabin concept existing at Clemmie Gill School
2. **Multipurpose Dining Hall and Kitchen**	Similar to John Muir Lodge at present Clemmie Gill School
3. **Library**	Small facility – include assistant , to include assistant principal's office.
4. **Dispensary**	Identical to that projected for the Clemmie Gill School
5. **Toilets and Showers**	Identical to that at Clemmie Gill School
6. **Staff Housing**	Similar to presently existing Exeter House at the Clemmie Gill School – to provide housing for the resident staff and to include cooks' quarters, quarters for the assistant principal, a commons room and kitchenette
7. **Teachers' Workroom and Lounge**	Similar to facilities projected for Clemmie Gill School
8. **Village Chiefs' Quarters**	Living quarters for the two village chiefs (head counselors). Identical to those projected for the Clemmie Gill School
9. **Swimming Pool**	
10. **Outdoor Amphitheater**	
11. **Practice Rooms**	For musical and dramatic groups – with appropriate storage facilities for instruments and stage properties, costumes and related items
12. **Recording, Videotaping and Audio-Visual Facilities**	
13. **Outdoor Areas**	

THE MAX COCHRAN LABORATORY SCHOOL

One of the most important recommendations submitted by the planning committee for the Environmental Center was that a laboratory school for young children should be established as a satellite facility of the Environmental Center. Its recommendation directed that this was to be a very special and unique type of school – one which perhaps has no counterpart anywhere upon the earth but which could become a prototype for educational planning tomorrow.

HERE WE WILL PLAN AND RAISE A SCHOOL WHICH TRULY STRIVES FOR A SENSE OF HUMAN COMMUNITY WITHIN AN INSTITUTIONAL MATRIX

1. **It will be a school in which children, parent surrogates, teachers, and other learning and developmental specialists will function together as integral elements of a common community of learning and living; its curriculum will be based upon life experiences, and its relationships will be rooted in those interpersonal relationships which reflect man's most generous and noble instincts and ethical commitments.**

2. **It will be a school whose primary focus is upon those who are very young, and for whom life is just beginning, but those who serve it as teacher-counselors and as surrogate parents will include people of many ages and experiences and skills.** Some will have lived many years and will bring to children the benefits of their venerability and wisdom.

3. **It will be a school which accepts responsibility for the education of children on a twenty-four hour basis, for we recognize that the learnings of children go on in ways which are profoundly influential and strong during those hours when they are outside a classroom's walls,** and we propose to build a school in which we consciously order and structure such circumstances in terms of their influences upon the children. Thus truly may we speak of **education as experience.**

4. **It will be a school which is a human social community in microcosm, for in it children and adults will live and work and play and learn in the warmth of their own houses, both as recipients and extenders of care and love and compassion, those vital life processes which nourish and sustain man.** Professionally trained specialists will work with children in formalized learning situations at times each day, to be sure, but equally important will be the learnings which are related to the experiences which they have within their family units and within the extended primary community where **all** share in the common concerns of educating the young on levels of compassion and caring. This is not a new concept, surely, for in virtually all primitive societies at various stages of their development, the education of the young has been a community concern. All members of the community participated in that enterprise, and only as societies became more specialized was that vital process eliminated and aborted, with resultant alienation and diminishment in the quality of human relationships and the impersonalization of life. Here we propose to return once more to that more intimate relationship of living and learning.

5. **It will be a laboratory of learning which will invite the scientist to come to study and observe the phenomena of the steaching-learning process;** it will be a laboratory which encourages inquiry and research into the complexity of that process. Here many and varied practices will be undertaken and studied, and here such practices will challenge theory, constantly testing and probing to determine its validity and to generate new and better theoretical prototypes for improving practices everywhere. Its influence will reach out far beyond its own physical setting, for it will be truly a laboratory school, constantly pushing at the frontiers of human knowledge. Nor will its concerns be limited to studies by the behavioral scientists and by those who study the phenomena of human learning; it will invite also the humanists – the artists, the musicians, the creators – to come so they may develop greater insights into the nature of human creativity as phenomena of human intelligence. It will be a laboratory for the **Facility for the Research of Human Behavior,** and it will be a laboratory also for the **Humanities Center.** Those who come to learn from children will teach them also, and artists and scientists and others who come will contribute also of their experiences and talents to the education of the children and to the enrichment of their lives.

6. **It is projected to remain always a small school.** Designed to serve a maximum of 250 children ranging from three to twelve years of age, it will remain always a friendly and intimate place. Basic instructional groups will usually not exceed twenty-five children, but often they will be much smaller, and often they will involve one-to-one adult and child relationships. Sometimes the teacher may be a trained professional; sometimes he will be another wise and mature adult; sometimes he may be an older child; at times he may be a famous scientist or an artist or a poet. Conventional grade levels or other traditional devices whereby we classify or categorize children

will not be used here, nor will classical systems of grouping. Learning groups will always be flexible, depending upon objectives and purposes. Much learning will be based upon independent study, which finds its focus in the needs and purposes of him who is the learner.

7. **It will be a school which stresses environmental education as a strong undergirding for its curriculum.** Here in its secluded natural setting, all the out-of-doors will become a "classroom without walls." Children will have opportunities to observe and relate firsthand to many animate and inanimate phenomena of nature – to rocks and trees and streams; to mountains and meadows and grass and flowers; to rain and wind and ice and snow; to birds and snakes and squirrels and deer; to passing seasons and sunsets and night sounds; to cycles of birth and growth and death and decay. Countless stimuli will crowd in upon them, and they will be encouraged to question and speculate and theorize and learn. It will be the role of those who guide their development to help them build upon those strong but primitive drives to learn and know so they may gain in sophistication as they grow; and it will be their role also to make certain that such learnings are more – much more – than merely yearnings to know or to satisfy childlike curiosities, for such learnings have ethical and moral implications also, as even the smallest child is constantly guided to ask, "What is my relationship and responsibility to all of this ?"

8. **It will be a school which functions in a natural setting and which builds its experiences of learning upon the incredibly rich resources of nature's classroom. But it will not be restricted to those experiences. It is planned also to provide others which are more deliberately structured to cater for the interests and needs of children.** A major learning resource of this school, for example, will be a small farm with small scale buildings which house typical farm animals – ponies, burros, calves, sheep, goats, pigs, chickens, ducks and geese. They will be the friends and companions of the children and children will care for them as part of their responsibilities at this school. In relating to them, children will not only learn compassion and gentleness and kindness toward helpless things but they will also be stimulated to speak and read and write. These are experiences which children who live in crowded houses with concrete sidewalks and asphalt streets can never know. Here it is proposed that they shall know them intimately as part of their experiences of learning.

9. **The facilities of this school will include also many planned experiences which stimulate actual life experiences and which stimulate the growth of intellectual capacities and social skills.** It is projected, for example, that one of the facilities of this school will be an actual "child-sized" market where they may purchase items needed in their studies and foods for use by their "families". It is anticipated that the children will live in small family-sized groups in individual cottages with surrogate parents, and these experiences and relationships of living will be a profoundly important part of the educational process. The parent-surrogates will come from many sources; some will be young married couples who work at **SCICON**; some will have their own children as well as the foster children whom they host; others will be retired couples who care about children. There are many possibilities, and they will be creatively utilized.

10. **There will be no classrooms in the traditional sense, but there will be buildings which are essentially shells which can be modified for many instructional purposes involving large and small groups.** Colloquially such facilities will be designated as **lofting areas.** They will lend themselves for use as studios, laboratories, shops, lecture areas, research centers, performance areas, or whatever the learning needs require. This will never be a school where rigid rows of learners sit passively listening to "truths" which are not relevant to them, engaging in activities which do not speak to their interests or needs. It will be a place where poets are encouraged to develop, and artists, and where those who find beauty and inspiration in the power of language will be encouraged to speak and write. It will be a school in which children will be encouraged to create, to question, to believe or not to believe, to speculate, and to dream. It will be a school where children will always be encouraged to do more – so much more – than just acquire the standardized skills of the culture which provide security and status.

11. **It will be a school which is concerned with reconciliation within the human family: reconciliation between generations, between adults and children, among different social groups, among those whose skins are variously pigmented, and among those who look and act and behave and think differently.** It will attempt to understand and to promote circumstances and conditions in which children may live with greater understanding, acceptance, respect, and trust and love so each may come to know and accept the legitimacy of his own uniqueness as a member of the human family and so he may grow to know and love other men who are also members of that family.

For more exact details concerning the facilities which are to be incorporated into this laboratory school, the reader is asked to consult **Section IV; Educational Specifications.**

THE ASTROPHYSICAL LABORATORY FACILITY

"ON A MOUNTAIN TOP, WE SHALL BUILD A HIGHWAY TO THE STARS – AND BEYOND!"

Perhaps the most awesome challenge to the mind of man is to be found as he contemplates the vast infinitudes of cosmic space; its origins, limits, realities and mysteries. Since man first looked up and saw the stars, he has speculated and wondered concerning his relationship to the universe and to the vast infinitudes which lie beyond. He has crouched and cowered in fear before manifestations of incredible cosmic forces; he has knelt in reverence and awe as he contemplated their dimensions and significance. They have influenced and inspired his science and art and literature and music and philosophy. In the silence of vast, trackless deserts and on the endless plains of the seas, they have been his reassurance and guide.

To consider the implications of astronomical studies is to be concerned both with scientific phenomena and with philosophical speculations which reach beyond the probing of the most powerful telescopes that man can build. It is to be concerned with disciplines such as astronomy, physics, chemistry and astrobiology; it is to be concerned also with studies of mythology and literature and of philosophy and religion. It is to stimulate man's search and quest along such a broad highway of interdisciplinary studies that **SCICON'S** astrophysical programs will be directed.

> **"OPEN HERE AT SCICON A WINDOW TO THE STARS," THE ASTROPHYSICAL PLANNING COMMITTEE SAID, "A WINDOW TO THE VAST INFINITUDES OF SPACE WHERE STARS ARE BORN AND DIE IN YET UNPROFANED NEBULAE. RAISE HERE A FACILITY AND CREATE A PROGRAM WHERE CHILDREN MAY COME TO CONTEMPLATE MYSTERY AND GRANDEUR; AND WHERE SCIENTISTS MAY COME ALSO TO STUDY AND CONDUCT RESEARCH AS THEY PROBE YET UNANSWERED QUESTIONS AND CONSIDER YET UNEXPLORED DIMENSIONS OF MAN'S LONELY BUT GLORIOUS QUEST."**

Here children and men will come to experience the excitement of exploring man's final frontier, to stand, literally and figuratively along the shore, gazing out into a vast and limitless ocean of space. They will come to learn concerning scientific matters and they will come also to realize somewhat more clearly their own relationships with a cosmos which is vast and mysterious and which challenges man, the ancient and lonely traveler, to consider his destination and his course. Here scientists will search the heavens as they seek to add yet more to mankind's vested capital of knowledge and wisdom. It will be a tool of science to facilitate objective inquiries and studies, and it will be also a facilitator which stimulates the minds of men to reach out beyond even the most distant celestial systems toward mankind's utmost searchings and strivings, where the boundaries of science merge finally with those of philosophy and the questions he asks become inquiries of man's ultimate concerns and speculations.

The Astrophysical Laboratory Facility is considered to be a subsystem of the Environmental Center and will be administered under the direction of that center. Facilities and equipment which are projected for the Astrophysical Facility include the following, which are listed in greater detail in Section IV; Educational Specifications:

1. Major Observatory	to house a 37" (or larger) reflector telescope
2. Minor Observatories (3)	to house three smaller telescopes (reflector and refractors)
3. Observatorium	an outdoor instructional facility
4. Planetarium	
5. Auditorium-Classroom and Earth Science Exhibit Hall	
6. Laboratory and Lens - Grinding Facility	

7. Solar Tower
8. Camera Obscura
9. Foucault Pendulum
10. Photographic Darkroom
11. Shop and Maintenance Facilities
12. Office Facilities for Director and Staff
13. Research Library
14. Housing (for supervisor, staff and guest housing)

FACILITY FOR THE RESEARCH OF HUMAN BEHAVIOR

A major component of the Environmental Center will be the Facility for the Research of Human Behavior. This facility will function to support the work of those who specialize in studies of human behavior and social and cultural interaction. Here they will find opportunities to conduct individual and group research projects and studies. Its facilities and resources will invite the involvement of psychologists, psychiatrists, sociologists, cultural anthropologists, criminologists, social workers, theologians, and scholars from other related disciplines which study man and his behavior.

1. Particularly will it provide opportunities for such scholars and scientists to better understand those transactional processes by which the biological potentialities of human beings are aborted or fulfilled and actualized in specific environmental circumstances. Here they will be challenged to consider man and his latent genetic potentialities and how these appear to be affected by his environmental milieu; here they will be able to inquire concerning the conditions and circumstances which are maximally hospitable to his survival and psychic expansion.

2. This facility will encourage research studies concerning the nature of human intellectual activities, particularly in reference to those cerebral processes which are concerned with learning at various levels of affective and cognitive behavior.

3. It will encourage studies which seek to know more concerning human intelligence in all of its many manifestations, including studies of its extremes (giftedness and mental retardation), and particularly of such phenomena as creativity. To be utilized in such research studies will be many vehicles and methodologies. There are some matters on the human agenda, for example, which can be best studied by psychoanalytic methods and strategies, and they must be approached in that way if the resulting data and conclusions are to be relevant and valid.

4. A major emphasis and thrust of research at this facility will be upon the phenomenological aspects of learning, and educational psychologists and learning theorists will be particularly encouraged to conduct studies which analyze the psychology of learning in the context of undirected experience and discovery (involving both human and non-human organisms) and also in the context of learning as a consequence of deliberately planned and structured formal experiences which may be characterized as teaching. They will be encouraged to define more precisely and exactly the ways in which the human organism hears, sees, learns, remembers, stores data and retrieves and interprets it, and how it restructures the input of its sensory mechanisms into new conceptualizations and systems of thought. An important facility for such research will be the Max Cochran Laboratory School, which is an integral part of the Environmental Center.

5. Another category of research which will be conducted under the sponsorship of this facility will be related to studies of human personality. Such studies will be concerned with the so-called "normal" personality structures and also with those which are designated as "abnormal" in the sense that they are characterized by deviate behaviors and pathologies. They will consider man as a specialized biological system which manifests complicated and varied emotional reactions, some of which are characterized by spontaneous and primitive behavior and others which are highly purposeful and controlled.

6. Here also will be conducted studies related to those human transactions which are designated as "socialization." Consideration will be given to studies of the social norms by which men and social groups live, to role expectations and cultural conditioning, and how these affect human behavior.

7. Studies relating to how man communicates through various systems and subsystems and how he uses various communicational sign-symbols will be made, and analyses of factors which inhibit or stimulate communication will also be made for communication remains as one of the most frustrating and troublesome items on the human agenda. Men speak, but others do not hear, and too often inability to communicate becomes the basis not for understanding, cooperation and reconciliation but for conflict, alienation, hostility and misunderstanding.

8. This facility will also encourage research related to cultural characteristics and behavior patterns of members of various social and ethnic subgroups and systems so that such improved understandings can contribute to the easing of many tensions in our national life. Problems of urban living, racial and ethnic alienation, the apathy of poverty, socioeconomic class hostilities, intergeneralizational conflicts of youth and adults, problems of crime and delinquency, technologically induced impersonalization of life, regional and religious conflicts, aggression and many related concerns will be probed and studied with the expectation of providing more intelligent direction to many of our social priorities and goals.

9. In concert with specialists from the Humanities Center, studies and research will be done at this facility concerning value systems and their implications for human behavior. Such studies will include consideration of conflicting value systems, the multiplicity of moral codes and social mores which so often are in contradiction, and the consequences of such contradictions upon the mental health and behavior of children and adults.

10. A major focus for the research activities of this facility will be related to studies which attempt to understand the phenomenon of alienation in human relationships. In a world of magnificent potentialities, man continues to live with too much pain and too many unresolved conflicts and unrealized potentialities. He has created splendid instruments for enriching life, but too often they are used not to enrich life but to violate it, and they add not to tranquility and human good but rather to the burdens of men who live too often in despair and uncertainty and without faith in themselves or others.

Indeed this facility is considered to be of profound importance, for man's inability to come to grips with or to solve the most basic problems of human interaction and relationship remains as the most dangerous and frustrating item on the agenda of human affairs. He lives with resources and material potentialities infinitely richer than those of any kings of antiquity. His store of knowledge is far greater than Solomon knew. He has perfected wings that carry him higher than Icarus ever flew, and fins which transport him into the silent world of ocean depths. He has conquered the highest mountains, and almost casually he has changed the course of the mightiest rivers.

He has harnessed the very power of the sun and has destroyed matter. He stands now at the threshold of life's creation. He stills the beating of the human heart, and at his command it quickens once again with life. He peers into the microcosmic world of living cells and into the structure of atoms. He walks upon the moon and reaches out beyond the still, white world of stars and knows the strangeness of silent places of celestial creation.

But for rude and unknown reasons, he has fashioned terrible instruments of the Apocalypse, and he lives, in the words of the ancient singer, "in fear of the terror that walks by night, the arrow which flies by day, and the pestilence that waits at noonday."

He lives with fear, and his fear becomes the father of cruelty and hate. Too often he is at war, even with his own body and spirit; too many times he is incapable of giving love – or receiving it. He has lost even that primitive sense of community which characterized his beginnings; he cannot communicate any longer with the gods who once spoke to him, and he exists in a world of strange dimensions and distorted meanings. He has created complex social institutions to serve his needs, but they have turned upon him and become prison houses of his body and spirit. He has created vast systems of technology to enrich his economic well being and to serve his creature comforts, but they have not brought him happiness or even joy, and often they have exacted their own terrible price in terms of depersonalizing him and divesting him of that which makes him man. He walks upon the moon, but he has not yet learned to walk upon the earth which is his home.

He lives with limitless resources, including the seminal genius of his own intellectual capacities for creating and reordering and restructuring the circumstances and conditions of his world, but his capacities to actualize such potentialities lie dormant and sleeping. His behavior too often is guided and motivated not by nobility but by his anxieties, anger, hostilities, rootlessness, aggression, social disorganization, apathy, loneliness, bitterness, prejudices, estrangement, normlessness and self-denial.

THE SOCIAL CONSEQUENCES OF HIS DELINQUENCY, CRIME, MENTAL ILLNESS, RACIAL CONFLICTS, WARFARE, DRUG ADDICTION, BREAKDOWNS OF FAMILY STRUCTURES, AND OTHER TRAGIC CIRCUMSTANCES CHALLENGE US TO SEARCH WITH EVER INCREASING URGENCY FOR MORE EFFECTIVE WAYS OF HELPING MAN RESOLVE THESE BURDENSOME PROBLEMS AND TO ESTABLISH MORE MEANINGFUL RELATIONSHIPS AND DIALOGUE WITH HIS FELLOW MEN ON LEVELS WHICH ARE MORE ACCEPTING AND LOVING.

These concerns challenge the best and most creative efforts of great scholars from many disciplines. This facility will provide a setting where they can come to speculate concerning man. Here they can study the implications of his complicated intellectual processes, his interests, drives, responses, and his capacities for gentleness and love. They can consider his capacities to learn and to store, retrieve and utilize data for problem-solving and decision-making, and his potentialities for adjusting to an environment which he is constantly changing , and is, in turn, affected by.

This facility will be one in which, insofar as possible, structured and intellectually disciplined research will be encouraged. Its activities will not be restricted only to quantifiable or rigidly structured studies, for that would eliminate too many areas of study and concern which do not lend themselves readily to such research, but whenever possible, such studies will be encouraged; The **methodology of science** will be emphasized. This stresses as its primary canon, disciplined, empirical observation and rigorous reliance on evidence; it abjures and rejects personal biases and social, political, religious, moral and ethical predilections in its determination to seek objective conclusions, insofar as such conclusions are possible within the parameters of socially responsible and useful studies. **The motivating thrust of its investigations will be social accountability. They will be rooted always in a concern for life and the well being of the human condition; in effect, they will seek to know more about man because we care about man.**

To implement its functioning, the following facilities were recommended by the planning subcommittee:

1. Central Building:	The major facility at this location will be a large central building with a sheltered, screened roof garden. The main floor is projected as a multipurpose room with a level floor, a stage, and a fireplace at the far end. A kitchen will be attached. Adjoining the auditorium will be smaller rooms with sliding partitions which can be opened to make them part of the main auditorium. Otherwise they can be used as smaller conference rooms or even temporary offices. These rooms will have sliding exterior doors which open to walled-off garden areas which become extensions of the rooms. The second floor, to be reached from outside, will have staff offices for the administrators, staff and visiting scholars. The roof garden will be secluded by exterior walls and a movable roof. It will be a quiet place for rest, relaxation and therapy. It will have a small pool and a sauna bath. It will also have several private therapy areas. Somewhere in the building will be two soundproofed therapy areas.
2. General Lounge	This will be a separate facility from the main building. It is intended for small conferences and and staff use. It will have restrooms and a hospitality facility. It will accommodate 150 center participants for meetings and conferences.
3. Staff Lounge-Workroom	This will accommodate twenty-five people and will be used for conferences and for staff work activities. The workroom will be equipped with a small research library of professional books and periodicals and with a data storage and retrieval system.
4. Seminar Rooms	Six rooms for seminars, special testing, clinical observation and special conferences.
5. Closed Circuit TV Facilities	To be installed in all conference buildings and connected with other centers.
6. Staff Housing	Dormitory-type, with minimal dining facilities and kitchen. To accommodate 50 participants. Several small modest cottages to accommodate special scholars in residence who need more privacy.
7. Director's House	
8. Outdoor Quiet Areas	Quiet trail areas and vistas. They may have primitive shelters or rustic benches and tables placed at strategic spots.

THE HUMANITIES CENTER

From the beginning, it has been apparent that one of the important centers at SCICON must be a center for the humanities. The need for such a center is great in this rural agricultural valley which in so many ways is devoid of many cultural resources. Nor is such deprivation unique to central California, for the hunger for beauty and meaning in America does not seem to be too great. It has been perceptively stated that America has many museums of art which neatly isolate artistic expression, but outside of their walls, our national insensitivity to the beauty and quality of our daily environment is everywhere obvious. **To find ways of relating the humanities to the daily lives and activities and experiences of children and men who come to SCICON is the challenge which confronts us.**

THE PLAN FOR A HUMANITIES CENTER CONSISTS OF MORE THAN JUST COLLECTIONS OF STUDIOS AND FACILITIES FOR MUSIC, ART, AND RELATED DISCIPLINES AT THIS SITE. IT IS NOT EVEN PROJECTED AS JUST A PLACE WHERE ARTISTS AND OTHERS CAN COME TO WORK FREELY AND JOYOUSLY AT THEIR CREATIVE TASKS, ALTHOUGH THIS WILL BE AN IMPORTANT ASPECT OF ITS EXISTENCE . IT IS CONCEIVED AS A CENTER WHICH WILL CONSCIOUSLY AND DELIBERATELY ATTEMPT TO INFLUENCE ALL THOSE WHOSE LIVES IT TOUCHES SO THEY WILL TRULY UNDERSTAND THE FUNCTION OF ART AS EXPERIENCE: ONLY THEN WILL THEY BE MINDFUL OF THEIR SOCIAL COMMITMENT TO USE THEIR GENIUS AND CREATIVITY IN THE SERVICE OF MAN AND TO EXALT HUMAN LIFE. ONLY THEN WILL THEY BE INFLUENCED TO ORDER MORE HEROIC STRUCTURES AND TO CREATE MORE LOVELY SYMBOLS, MORE MAJESTIC FORMS, MORE HARMONIOUS SOUNDS, MORE SPLENDID DESIGNS, AND MORE GRACEFUL MOVEMENTS IN THE UNIVERSE.

In this setting, both adults and children will be encouraged to develop deeper appreciations of color and light and form. Here they will find many media— paper, wood, metal, and clay – with which to express the understandings of their eyes and hands and hearts.

Here they will find opportunities and encouragement to translate their innermost thoughts and deepest emotions into the power of ideas which are expressed as language with which man speaks of his joys and sorrows, his grief and his anger, and his happiness and his exultation.

Here men also will express those deep feelings of their beings which speak through the language of music, both that which they create and that which they interpret as the creation of others. It will encourage men to seek new avenues of creative expression through other vehicles, such as drama and dance.

It will invite participants of many interests and motivations and purposes – serious artists and creators of new forms and statments which speak of man's vitality and joy – and casual seekers also, who come to test their powers. It will always be a lively place for those who come to express and create, for here they will find freedom to experiment and to make their own authentic statements.

Some will come to be challenged, and some to challenge others; some will come to be inspired, and some to inspire others; some will be haunted by visions of pictures still unpainted, by thoughts yet unexpressed, by songs still unsung, and by forms yet uncreated. Each will find encouragement to express through whatever forms he wishes, those values which are his alone.

In this setting, where every vista manifests the beauties of nature, the creator of forms which are lovely, those who come will be encouraged to create appropriately worthy human responses which are rooted in a humanistic concern for man and for the earth which is his habitation. Surely there can be no more appropriate statement of the purpose for which this center will exist than to recall the words of Michaelangelo:

"My soul can find no stairway to heaven unless it be earth's loveliness."

Projected as facilities for this center are the following (The reader is invited to see **Section IV: Educational Specifications,** for details)

1. **Main Building**	A major, well equipped theater for dramatic and musical productions (the White Oaks Theatre concept); with lounge, foyer, ticket office, projection facilities, costumes and dressing rooms, makeup rooms, choral rooms, instrument practice and storage rooms, music library.
2. **Outdoor Amphitheater**	

3. Auxiliary Outdoor Amphitheater	
4. Involvement Area Clusters	Specialized areas for the exploration of various phases of creative expression, including areas or studios for drawing, paintint, printing, crafts, sculpture, ceramics, jewelry making, photography, and cinegraphic and television arts.
5. Dance Clusters	Demonstration and performance areas for the dance. They will require a stage and additional floor space as well as facilities for musical reproduction; minimal audience space will be required. Several such "clusters" will be needed.
6. Construction Clusters	These are primarily technical areas and will include woodshops, arts and crafts shops, furniture construction facilities, and a center for architectural design and construction. It will include a casting shop for resins, plaster and cement, a metal shop for cutting and welding, and a smelting furnace.
7. Lecture Rooms	Four lecture rooms of varying sizes with sound reproduction facilities. These will be connected by courts and gardens.
8. Individual Studios	Relatively isolated studios with minimal living facilities for artists in residence.
9. "Get Lost" Studios	Primitive modest workrooms, smaller and more isolated than the individual studios.
10. Open Shelters for Creativity	Several open shelters where participants can work in environmental settings.
11. Housing	Guest housing, dormitory style, with dining and kitchen facilities to cater for 100. Director's house and staff housing of style to be found at other centers.

SECTION IV

EDUCATIONAL SPECIFICATIONS

THE CONFERENCE AND STUDENT CENTER

The Conference and Student Center is projected as that arm of the campus which will host the many groups who come to **SCICON** for meetings, conferences, specialized study and for various other purposes. Such large and small groups will constantly be in residence at **SCICON**. Some will be involved in specific activities at one or more of the centers. Others will have no direct relationship to any ongoing activities but will come because the campus is an attractive and inspirational setting for their conferences or meetings. The Conference and Student Center will provide housing, meals, special services and all of the required amenities so groups which are on site will be able to work in a setting which is relaxed, pleasant and inspirational. There will be ample opportunities for both working and leisure time activities.

Many of the conference facilities will be for regular adult groups, and although costs will be kept to reasonable minimums, it is recognized that even such costs will be prohibitively high for many young people with extremely limited finances, and so it is planned to develop an ancillary facility for students as part of the Conference Center. It will have dormitory type housing and will be organized on a youth hostel concept with minimal facilities which are quite modest but clean and comfortable. The low prices which it will be possible to charge will mean that many young people will be able to come to **SCICON** for conferences and meetings.

We consider it quite important that such facilities be established. A frequently heard complaint of young people is that today's society is not relevant, and undoubtedly partly this relates to the fact that they are not involved in many situations, and consequently there is little chance for dialogue between them and older people. Students would be invited routinely to conferences and meetings which were scheduled for the Conference Center, and having such low cost housing facilities available to them would make it possible for them to attend and participate.

The Conference and Student Center will be operated as one unit with a director in charge. The two facilities (for adults and youth), however, will be relatively autonomous and self contained. The youth facility will accommodate one hundred guests. Each dormitory will have a small, unelaborate kitchen unit suitable for fixing snacks. Each dormitory will have central toilet and shower facilities, and there will be a small commons area at each floor level where participants may meet for discussions or group singing or games without disturbing adults at the main conference center.

The adult center will also feature dormitory type buildings but there will be some private and semi-private rooms and cottages available. Multiple story buildings, as well as cottages, will be used.

Projected for the Conference Center and the Student Center are the following facilities (See Section IV; Educational Facilities, for details)

1. Conference Hall	A large auditorium facility with seating capacity for 350; equipped with stage and all necessary sound and audio-visual facilities, including closed circuit television. This will be a level floored building with dressing rooms and orchestra rooms adjoining.
2. Dining Halls	A companion building to the Conference Hall. This large dining hall will accommodate 350 diners; a kitchen with all necessary facilities and equipment will adjoin the dining hall. Next to the large dining hall will be a smaller one which can cater for 100 diners. A small staff dining room with a capacity of 50 persons will be nearby. All three dining rooms will be served by a common kitchen.
3. Guest Housing	Mostly of the dormitory type for multiple occupancy. Some private and semi-private rooms will also be available. Multi-story buildings will be used, and also some cottages will be available.
4. Student Center	Dormitories, designed for multiple occupancy, will be featured at the Student Center. Capacity will be 100 students.
5. Little Theater	A small theater will be built; it will seat 100 and will be used especially for previewing or screening of films, live stage productions, and for meetings of various groups.
6. Seminar Rooms	Eight rooms with seating capacities ranging from 30 to 100. All will be equipped with closed circuit television.

7. Meditation Area	A quiet area for individual or group use. It will include both indoor and outdoor areas, and some will be combinations of these, featuring buildings which open out onto garden-like settings. The building for indoor meditation should be so designed that it can be used as a chapel for religious meetings as desired. All facilities will be open to all who desire to use them, individually or as part of various groups.
8. Recreational Area	Attention will be given to the development of facilities for recreational activities. To be developed are: a large swimming pool, a campfire and picnic area with barbeque facilities, a large patio for lounging, visiting and sunbathing, an indoor lounge, game rooms, a reading room, and outdoor areas for sports such as volleyball, shuffleboard and croquet. An outdoor amphitheater will be built.
9. Reception Center and General Office	Adjacent to the main lounge and close to general office will be a reception center where guests check in, receive housing, and their general comfort is assured. The administrative functions concerning the center emanate from this location.
10. Storage and Maintenance	Adequate areas for storage and maintenance will be provided. These will be located in secluded areas with easy access to the center.
11. Parking Facilities	A secluded parking area large enough to accommodate 200 cars will be provided. Cars will not be used at the conference grounds, and this area will be mostly for the vehicles of guests who have driven to the campus which must be cared for on site. On campus, small electric cars will transport guests from place to place. Sheltered waiting stations or miniature depots will be provided.
12. Radio and Television Facilities	A small but well equipped radio and television station, with provisions for broadcasting and telecasting to all campus locations, will be built. Facilities for ETV with stage setting and adult viewing are desired.
13. Exhibit Hall	This hall will be equipped with facilities for exhibiting both locally and commercially developed exhibits. It will be located close to the main conference hall.
14. Security Personnel Station	An operational and administrative base for security office personnel. It will be a modest small facility. It should have two bedrooms and an office.
15. Quiet Walking Areas	A system of trails and quiet areas for walking and meditation is needed. The trails and buildings and all the rest of the indicated facilities will be connected by walkways and plantings. The setting will also be enhanced by little gardens and pools and natural vistas with rustic furniture. Small shelters will be strategically located to shield walkers from the sun and rain.

I. Administrative Operational Center

A. Site Requirements

A. SITE – 5 acres at the present parking lot

Access – Helicopter pad

Topography and Drainage – terraced and guttered

Soil Composition – rock and sand

Special Considerations – buildings multi-storied; keep open spaces

Signs – directional and unobtrusive

Lighting – non-general and for safety purposes

Trash Containers -- inconspicuous

Drinking Fountains – strategically placed for traffic

Sewage Disposal – designed for expansion

B. PLANNING – Buildings in harmony with the environment. First point of contact for public (after main gate Security Entrance Station). Buildings should be in close proximity to each other.

C. SPACE – Square footage specified for buildings is approximate and may be adjusted to better fit the needs as planning progresses.

The future may bring demands for campus expansion, therefore, initial planning should consider the feasibility of some facilities being of multi-story construction.

It is strongly felt that for this, **and other centers,** the planning be for a compact campus arrangement.

I. ADMINISTRATIVE OPERATIONAL CENTER

A. SITE REQUIREMENTS

Activity	Space or Function	Planning
1. Administration	Parking — at main administration building	(75) Staff, (30) Visitors (35) Cars
	Master parking at Reception area for all Centers (excluding Conference Center) (300 cars)	Bus loading ramps/shelters for all Centers
	Access Roads	One way to all centers, as much as is possible
	Court Yard	At Administration Operational Center — resting and relating area — occasional outdoor meetings (100)
2. Operations	Maintenance Yard	
	Swimming Pool (only responsible to this Center, primarily caters to Environmental Center)	Olympic size, near new bar-b-que site; include necessary dressing rooms, minimal spectator facilities
	Sauna	Steam bath and physical therapy facilities
	Laundry	To serve all Centers

B. PLANNING REQUIREMENTS

Space No.	Space	Function and Relationships General Characteristics
I. Administrative Operational Center		The heart and nerve center of the campus
A. Planning Requirements		
1. Main Administration Building:		This major building will house (a) the office of the president and his satellite executives, including the president's assistants for program development, site operation, planning and development, business affairs and public relations, Friends of SCICON Foundation (b) conference rooms of various sizes, (c) interview rooms, (d) general office space for secretarial services, duplication and storage, (e) secure areas for storage of records and related items, (f) systems for external and internal communications. Included in this center should be office space for the Director of Facilities with space for those in charge of reservations and bookings, inventory control, purchasing, budgets, and related affairs. The office of the Director of Personnel would be located here. Food services and the housekeeping division would have its administrative function housed here. A small

I. Administrative Operational Center
B. Planning Requirements

Space No.	Space	Function and Relationships General Characteristics
	1. Main Administration Building (cont.)	pantry, lounge and a snack bar should be included in this facility. Radio, telephone and closed circuit TV communication facilities which are tied in to a campus-wide network should be housed here. A center for computer facilities to serve the needs of the Administrative Center and other centers on campus is needed and should be housed in this building or general area.
	2. Reception Center:	This is projected as a small attractive building close to the main entrance road. Its facilities should include a lounge with facilities for writing, reading and general relaxation. It will be the place where incoming people will stop for orientation, directions, to pay necessary fees, to check-out reservations and such matters. The operation of the facility would be under direction of the main administration building, but it would be separately located and staffed. As a facility of this center, a small **Security Entrance Station** will be located immediately at the entrance to the campus. This will be the first formal contact which visitors have with the campus. It will be a small glassed-in booth similar to that which is found at entrances to the national parks and it will serve to house a security guard or receptionist who will be on duty there at appropriate times to give information, to check passes, and to provide the types of initial services which are appropriate and helpful to incoming guests.
	3. Central Library and Museum:	A central library and museum building will be constructed close to the administration building. This will be the main library and materials resource center for the campus. It will contain most of the important collections of books, periodicals and related materials for teaching, although each of the smaller centers will also have sub-libraries to house specialized collections and equipment. These special sub-libraries, however, will all be under the direction of the main library which is located here at the Administrative Center. It should have stack space sufficient to house 10,000 volumes, and should have also storage space for periodicals, pamphlets and bulletins. It is expected that it would become a depository for materials from various governmental and public and private agencies

I. Administrative Operational Center
B. Planning Requirements

Space No.	Space	Function and Relationships General Characteristics
	3. Central Library and Museum (Cont.)	and it should include an archives section also. The main reading room should accommodate 50 readers, and there should be two smaller reading rooms with capacities of 15 and 25 respectively with microfilm reading facilities. There should also be study carrels in this building sufficient to house 10 readers and there should be two seminar rooms with a capacity of 15 and 25 persons. There should be facilities for electronic reproduction of materials. It should include also an instructional materials center with facilities for storing and viewing films, filmstrips, and videotapes, for listening to and making tapes and recordings, for storing collections of flat pictures and other instructional aids. Workshop facilities for the accession and repair of library and instructional materials should be provided. A photographic darkroom should be provided in the instructional materials center. Facilities for closed circuit television to serve the library and museum complex should be provided. **The Museum** should be connected to the library in some attractive way, through a series of walkways or some similar arrangement. It should have facilities for outdoor displays as well as indoor ones. The indoor museum should have facilities for permanent and changing exhibits. Workrooms and staff offices should be provided. A lecture hall with small stage and with facilities for use of audio-visual materials should be included.
	4. President's **Reception Suite**	**Housing for president** and reception/suite.
	5. Assistant President's Homes	Housing for Assistant Presidents or Directors (2).
	6. Infirmary	A small four-bed infirmary and nurses' facility station to care for emergency illness and first aid near the administrative office.
	7. Maintenance Buildings	This major complex should include buildings and storage areas for equipment and stores, as appropriate. It should include facilities for storage and repair of all vehicles and mechanical equipment, plumbing facilities and shops, electrical shop facilities, a carpentry and cabinet making, welding, painting, road and trail maintenance, repair and construction. The office of the superintendent of buildings and grounds should be here. A laundry facility adequate to care for the needs of the campus should be located here. Storage facilities for food and supplies should be located here, as

I. Administrative Operational Center
B. Planning Requirements

Space No.	Space	Function and Relationships General Characteristics
	7. Maintenance Buildings (Cont.)	well as storage facilities for all equipment and supplies routinely needed to serve the needs of the campus. There should be facilities for shipping and receiving and there should be facilities also for intramural distribution of all required items to the various on-campus centers.
	General Parking Facilities	Obscured, 300 cars, near administrative site, screened by planting at Reception Area.
	Staff Parking at Administrative Building	75 Staff; 30 visitors.
	8. House, Superintendent of Buildings and Grounds	
	Fire Station	To house fire fighting equipment for all centers; quarters for 2 men. 1,000 gal. tanker and small pumper, 4 x 4 pickup w/150 gal. high pressure system — hard line.

I. Administrative Operational Center

C. Detailed Space Requirements

Group A

Facility Function Administrative Operational Center

Space No.	Space	No. of Spaces	Capacity Each Space	Net Area
	1. Administration Building			
A1.1	Offices			
	President	1	3	350
	Assistant @ 150	5	3	750
A1.2	Offices			
	Director	1	3	200
	Assistants @ 150	5	3	750
A1.3	Interview Rooms	1	5	150
A1.4	Board Room 15 Board, 15 Visitors	1	30	1000
A1.5	Conference Rooms	1	50	1000
		1	15	300
A1.6	General Office (Pool Area)	1	10	750
A1.7	Business Office (Pool Area)	1	5	375
A1.8	Data Processing Center Director, Programmer Key Punch, Computer, Storage	5	3	1850
A1.9	Duplication and Storage	1	–	1000
A1.10	Secure Storage Area	1	–	400
A1.11	Reception & Waiting Room	1	8	450
A1.12	Staff Lounge	1	15	300
A1.13	TV Studio Control Room, 1 Studio	3	3	2500
A1.14	Radio Communications	1	1	100
A1.15	Rest Rooms	–	–	GSC
A1.16	President's Suite	1	10	–
				12,375
	2. Reception Area			
A2.1	Reception Area	1	40	800
A2.2	Security Entrance Station	1	1	120
	3. Central Library			
A3.1	Closed Stacks	1	10,000 Vols.	2000
A3.2	Open Stacks & Reading	1	50	1800
A3.3	Office	2	2	300
A3.4	Work & Mending Rooms	3	–	1350
A3.5	Periodical Room & Lounge	1	25	1200
A3.6	Instructional Materials Room	1	–	1200
A3.7	Film Viewing Room	1	–	150
A3.8	Dark Room	1	–	600
A3.9	Seminar Rooms	2	15 & 25	800

I. Administrative Operational Center
C. Detailed Space Requirements

Group	Facility Function
A	Administrative Operational Center

Space No.	Space	No. of Spaces	Capacity Each Space	Net Area
	3. Central Library (Cont.)			
A3.10	Research Reading Rooms	2	25	1000
A3.11	Equipment Storage	1	–	1200
				11600
	4. Museum			
A4.1	Curator's Office	1	2	150
A4.2	Work Rooms	2	–	2000
A4.3	Storage Room	1	–	6000
A4.4	Exhibit Hall	1	–	1200
A4.5	Lecture Hall & Multi-Use Exhibit	1	100	2850
				12200
	5. Housing			
A5.1	President's Suite	1	10	3000
A5.2	Assistants' Houses	2	Family	2200
				5200
	6. Infirmary			
A6.1	Reception & Waiting	1	4	125
A6.2	Nurse's Office	1	2	150
A6.3	Infirmary	1	4 beds	350
A6.4	Examination Room	1	2	100
A6.5	Store Room	1	–	150
A6.6	Rest Room – Men	1	–	GSC
A6.7	Rest Room – Women	1	–	GSC
				875
	7. Maintenance			
A7.1	Office	1	3	150
A7.2	Vehicle Storage	1	–	3000
A7.3	Vehicle Repair	1	–	900
A7.4	Electrical Shop	1	–	500
A7.5	Plumbing Shop	1	–	900
A7.6	Carpentry Shop	1	–	1500
A7.7	Paint Shop	1	–	900
A7.8	Welding Shop	1	–	900
A7.9	Receiving & Shipping	1	–	3000
A7.10	Road & Trail Maintenance	1	–	900
A7.11	Laundry	1	–	1500
A7.12	Linen Storage	1	–	300
A7.13	Commissary with Deep Freeze & Chill Box	1	–	900
A7.14	Mail Room	1	–	300
				15650
	8. Buildings & Grounds			
A8.1	Superintendent's House	1	Family	2200
A8.2	Fire Station	1	2 Engine	1500
			Total	61600

II. Environmental Center

A. Site

1. **Clemmie Gill School of Science and Conservation:** Presently existing two villages and projected to continue as a school and instructional site to serve students, teachers and researchers who come here to study. Many facilities for living and study already exist and it should be completed, adding new structures as indicated.

2. **Listening Hill Village:** To be part of the Clemmie Gill School, developed on Listening Hill. To be used, as music camp or other camp in summer.

3. **Max Cochran Laboratory School:** Nursery school and ungraded primary operated as a twenty-four hour school and part of the Environmental Center. Total capacity of 120 children, located in secluded area with Administrative Operational Center and closed to all vehicular traffic (except for service road).

4. **Astrophysical Laboratory School:** A sub-system of the Environmental Center and administered by that center. Located on Observatory Hill.

5. **Environmental Research Laboratory:** Adult facility for research, near maintenance yard.

Access – one way loop roads where possible

Topography and Drainage – terraced and guttered on slopes

Soil Composition – much rock and decomposed granite

Special Considerations – vehicle traffic kept out as much as possible

Signs – directional

Lighting – for safety

Trash Containers – inconspicuous

Drinking Fountains – strategically placed

Buildings – to blend in with surroundings

B. Planning

Buildings are for: Instructional (library, museum, observatory, etc.); administration operations; housing, should be flexible and blend with the area. They should take advantage of the outdoors with glass walls where possible, patios, etc.

C. Space

Size of buildings is approximate and may be changed to fit into general plan or meet needs as they develop. Plans to be developed having in mind the dispersal of all centers; but compacting building areas to avoid sprawl.

II. ENVIRONMENTAL CENTER

A. SITE REQUIREMENTS

Activity	Space or Function
General	
Auto Access and Circulation	Points of access to the campus should be clear and located to promote orderly circulation and to provide direct approaches to parking destination. Circulation should be organized to avoid ambiguity and conflict. Vehicular traffic, as much as possible, should be kept out of the living/dining areas. All parking at main parking lot.
Trails	Trail system should be developed to include foot paths for general in-site pedestrian traffic; black-topping should be considered; mini-amphitheaters on out trails.
General Landscaping	Developed with consideration of erosion control; as far as possible, natural appearance of area should be preserved; plants indigenous to area used.
Lighting	Lighting for safety at night, indirect.
Quiet Areas	Seats in natural nooks or beauty sites for few persons to talk or reflect.
Court Yards/Patios	In connection with each building.
Foot Bridges	At necessary places to cross creeks.
Recreation	Open Glade Area. This area presently occupied by the barbecue area or near it should be developed into a pleasant recreational area with facilities for picnics and other relaxed activities. A barbecue house should be built with facilities for serving food. Toilets should be installed. A sound system and night lighting should be installed also. Careful replanting should make this a quiet and shaded area for relaxation and rest and contemplation and varied social activities for the children and staff and guests. Large scale social functions such as the annual wildflower festival picnic would be held in this area – 3000. Swimming Pool – to accommodate 35 children. At Listening Hill site, include necessary dressing rooms.
Garden Area	Near tree farm. Space for lath house, garden and Garden House Ramada.
Bus Loading	Bus Loading Platform, A bus loading platform for unloading baggage and passengers.
Amphitheater	Outdoor camp fire amphitheater. An outdoor amphitheater type of facility is needed. This should seat 300 persons and it should have a campfire facility. It should also have a stage and shell with provisions for lighting and sound so it may be used for dramatic and musical productions.
Campfire Circle	Terraced and screen covered, west of John Muir Lodge across Bear Creek, 100 capacity.

II. Environmental Center

A. Site Requirements

Activity	Space or Function
Listening Hill Campus	An extension of the campus for the Environmental Center should be developed at Listening Hill, above the present Environmental Center campus. While other groups, especially the humanities group, will make extensive use of the Listening Hill facilities, the facilities will be opened by and under the general supervision of the Environmental Center and will be considered to be a unit of its already existing campus. In that sense, what needs to be planned is actually a facility virtually duplicating that which currently exists (in terms of housing, dining, etc.) at the Clemmie Gill School.
Outdoor Amphitheater	Outdoor Amphitheater. An outdoor amphitheater with stage, dressing rooms, storage space for instruments and stage properties should be provided. The amphitheater should have sound reproduction facilities and night lighting facilities. It should provide seating for 500 persons in the audience, 200 seats plus rest on rocks – cushions, etc.
Outdoor Areas	Outdoor Areas. A series of outdoor areas for individual and small group study and visitation should also be provided. These should be small secluded areas which are made relatively private and secluded by location and/or selective plantings. They should be equipped with shelters and benches where people can come to think, to read, to study, to visit, or where small class groups can meet. Duplicate in every facility.
Parking	Minimum staff (5)
Max Cochran Laboratory School	Outdoor Play and Study Areas To the fullest extent possible, the out-of-doors should be planned and utilized for play and study. Through the use of natural areas and terrain and through carefully planned plantings, all natural areas should be for maximal instructional advantage. This would include such considerations as meadows for playing, water for wading, quiet areas for contemplation, beautiful vistas to enjoy (or to paint or to interpret in music), trees to climb (or to lie under), and trails to hike. The use of shelters as learning areas needs to be considered. It is a marvelously rich environment for such development.
Farm	Farm A small fenced in area with a large red barn and other appropriate buildings. Would be used to house farm animals – cows, horses, sheep, pigs, ducks, chickens, etc. It would have facilities for small scale gardening experiences. It should be located in the general school area.
Environmental Research Laboratory	Adult Facility. Large open space buildings with water and laboratory facilities. Research plots. Lath houses, greenhouses. Small shop with power tools. Equipment shed. Small library facility and office for the Director. Several small office spaces for working scientists.
Astrophysical Facility	On Observatory Hill. Completely fenced area.
Life Science Building	Near tree farm. For students and for staff research.

II. ENVIRONMENTAL CENTER

B. PLANNING REQUIREMENTS

Space No.	Space	Function and relationships General Characteristics
1.	Library Clemmie Gill School	A small library for specialized collections is needed at this site. It should have shelves to house children's book collections and also a specialized adult and professional section; it should have a reading room sufficient to accommodate a group of 60 and a small conference room for staff meetings or individual study. It should have a small office-workroom. This building should be located southwest of John Muir Lodge.
2.	Office and Lounge Principal – Clemmie Gill School	Presently no office or administrative unit exists for this center. A small office should be built for the director with space for a secretary's office adjoining the principal's office. It should include a small workroom and supply room. It should also include a lounge for the staff. Presently teachers, interns and others who are on site have no place to go for conferences or to relax even for a few moments away from the children. This office facility would either be a part of John Muir Lodge, or located next to the existing Exeter House.
3.	Bakery and Deep Freeze, Clemmie Gill School	The kitchen facilities of John Muir Lodge are complete now except for a bakery and a deep freeze. These should be added to the existing lodge.
4.	Dispensary Clemmie Gill School	A small dispensary with first aid facilities for the nurse should be provided in John Muir Lodge. The facility should include a place for children to lie down and also a rest room. There should be blanket storage space here also for 200-300 blankets.
5.	Principal's House	A two-bedroom house, located just across the creek from Exeter House should be provided for the principal of the Clemmie Gill School.
5a.	Director's House Environmental Center	A two-bedroom house – probably in the area of the tree farm.
6.	Housing	For interns, teachers, and guests, should house 50 persons in a two-story motel type building, small dining-kitchen; commons area, 2 persons per room.
7.	Exeter House	Should be completed. Guest House. Housing for Clemmie Gill School teachers. Temporary on a week's basis.
8.	Ramadas	Six rustic shelters need to be built in various locations on the campus. These are roofed areas which provide shelter out of doors. They are actually outdoor classrooms for demonstrations, for resting, for films, and other purposes. They should be equipped with running water and rest rooms and electricity. They should be classroom size (to accommodate a group of 35 children).
	Large Ramada	West of John Muir Lodge – across Bear Creek – for folk dancing and other activities. 30 x 60 ft.
9.	Trail Shelters	These are actually much simplified versions of the Ramadas, and they are built on or near the Trails. They may be smaller and less elaborate, but they should have running water – six of these.
10.	Lath House	A lath house for native plants should be built (perhaps near the tree farm) for the Environmental Center. It should be 100 ft. x 100 ft. and should have running water. It should be shaded and it should have an open space

Space No.	Space	Function and Relationships General Characteristics
		in the middle. This facility would be used for growing native plants. Potting benches and tool and equipment sheds are to be included. An area for 6 bunkers for sand, loam, fertilizer and mulch is to be constructed.
10a.	Garden House Ramada	Teaching — study — resting area. Small food preparation center for garden products.
11.	Life Science Building	Near the tree farm. A workroom for research staff should be provided. It should include storage space, tables, duplicating equipment, water, art supplies, a small darkroom, construction tools, and other facilities for making instructional aids. A chemistry and biology lab should be included for students. A small museum for displaying both permanent and temporary collections of interest to children and adults needs to be planned at this location. It should have necessary cabinets and display cases with appropriate lighting. It should also have a small workroom-office which can be used for preparing displays and other purposes commonly associated with such a facility. Plant and animal display room.
12.	Environmental Research Laboratory Adult Facility	Large open space buildings with water and laboratory facilities, research plots, lath houses, greenhouses, small shop with power tools, equipment shed. It should include a small library facility and office for the director. Several small office spaces for working scientists should be included.
13.	Listening Hill Student Housing	Cabin-type housing similar to that which currently exists at the Sierra and Sequoia villages should be built at the Listening Hill site to accommodate 100 students. Each cabin should have a capacity of 20 and adequate storage space should be provided in the cabins.
14.	Listening Hill Multi-Purpose Dining	A dining hall with a 100-student capacity and designed to serve a multi-purpose function should be built at this site. This should be a facility similar to the existing Muir Lodge.
15.	Listening Hill Library	A small library with reading and work space for 35 students should be provided. It should include shelf space for books and periodical collections and it should include also a small office-workroom for staff use. This is also the assistant principal's office.
16.	Listening Hill Dispensary	A small dispensary for first aid, for nurse's quarters and with a place for quiet rest should be provided. A restroom should be provided in this facility. A blanket room should be included.
17.	Listening Hill	Toilets and showers to accommodate 100.
18.	Listening Hill Staff Housing	A staff house similar to the existing Exeter House should be provided. This should provide rooms for the staff and a commons area. It should accommodate 24adults. It should include kitchen facilities, cook's quarters for four and quarters for 2 assistant principals.
19.	Listening Hill Workshop and Lounge	Teacher Workshop and Lounge is a two-room facility consisting of a work room for the staff and a small attractive lounge. This facility should include

Space No.	Space	Function and Relationships General Characteristics
	Listening Hill Workshop and Lounge (Cont.)	restrooms and a small built-in kitchen unit.
20.	Listening Hill Village Chiefs' Quarters	Living quarters for the two village chiefs (counselors) should be provided. These should be cabin-type facilities with storage space.
21.	Listening Hill Practice Rooms	Six practice rooms for musical and dramatic groups should be provided. These should range in capacity from 15 to 75 students (one each with two having a twenty-five student capacity and two having a 35 student capacity. Appropriate instrument storage facilities should be provided also in these rooms.)
22.	Listening Hill Audio-Visual Facility	Recording, videotaping and audio-visual facilities; appropriate soundproof facilities for electronic recording and videotaping should be provided at this site. A storage and distribution area for audio-visual equipment should also be provided.
23.	Astrophysical Laboratory Major Observatory	This is projected as an observatory with a 37-inch reflector telescope (or larger), together with all of its essential components and housing.
24.	Astrophysical Laboratory Lesser Observatories	These four smaller telescopes will be located as ancillary telescopes close to the major one. Telescopes will be located at the highest part of the hill.
25.	Astrophysical Laboratory Observatorium	This outdoor area, with terraced seating, is intended to provide an area where students and others may study the heavens in a directed and structured situation under the guidance of an astronomer. It will be located in the same general area as the telescopes. It will accommodate a maximum of 120 persons at one time.
26.	Astrophysical Laboratory Planetarium	A conventional planetarium, capable of accommodating 120 persons, needs to be built at a site on Observatory Hill, somewhat lower than the observatories. Restrooms are needed here.
27.	Astrophysical Laboratory Auditorium Classroom Earth Sciences Hall and Exhibit Hall	A lecture hall and classroom with a capacity of 120 needs to be built near the planetarium. This facility should have a portable stage or raised area. It should have facilities for audio-visual use and sound reproduction as well as closed circuit TV. It should also be an exhibit hall. Restrooms are needed here.
28.	Astrophysical Laboratory and Lens-Grinding Facilities	This small building should be located close to the observatory complex. It is to be a laboratory and workshop to cater to the needs of the observatories and planetaria. Adequate storage and work space should be provided.
29.	Astrophysical Laboratory Solar Tower	To be located near the planetarium.
30.	Camera Obscura	Can be placed on side of hill looking downstream.
31.	Astrophysical Laboratory Foucault Pendulum	To be located near the planetarium.
32.	Astrophysical Laboratory Photographic Darkroom	This facility should be attached to the laboratory and lens-grinding facility.
33.	Astrophysical Laboratory Shop and Maintenance Area	This area should be as secluded and removed from the public area as possible and it should be designed to cater to the specialized needs of the equipment and facilities of this area.

Space No.	Space	Function and Relationships General Characteristics
34.	Astrophysical Laboratory Administrative Offices	General Astrophysical Facility Administrative Office with office space for the supervisor and his associates, as well as for visiting scholars or astronomers in residence should be provided. This area should also have a receptionist's office and space for routine clerical and administrative functions. A conference room should be included. A small kitchen should be provided.
35.	Astrophysical Laboratory Public Restrooms	In planetarium.
36.	Astrophysical Laboratory Research Library	A small room with shelving and several study carrels should be provided to fill the function of a research library for visiting scholars and fellows. This is not regarded as a library for general use. It probably would be attached to the general administrative office.
37.	Supervisors Quarters Astrophysical Laboratory	To be located in a secluded area somewhere near the site.
38.	Astrophysical Laboratory Housing (Staff and Guests)	A housing facility similar to Exeter House and with a capacity of 12 should be located at this site.
39.	Astrophysical Laboratory Housing (Student)	A small dormitory type facility for housing 20 students is needed — maybe added to Listening Hill.
40.	Max Cochran Laboratory School Lofting Areas	Formal classrooms, as traditionally conceived, would not be provided for the primary children, but there would be a series of learning centers designed as "Lofting Areas" which would be, in effect, empty shells which could be easily converted into learning centers for many activities involving formal experiences with books, research, supervised study, number and arithmetical experiences, art, music and dramatic experiences and others. Each center also could be used as a "home room" base, as this is traditionally conceived, but hopefully they will be flexibly used and not thought of as stations for rigidly graded and grouped classes of children. These Lofting Areas should not only be flexible in their space arrangements, but they should also incorporate to the fullest extent possible the facilities of the out-of-doors as instructional areas. The nursery school, however, should be considered to be rather permanent in function and usage, since these very young children probably should have a much more definite home base.
41.	Max Cochran Laboratory School (a) Cottages (b) Cottage for Principal (c) Cottage for Nurse	It is anticipated that this school would simulate to the fullest extent possible actual family situations in which the children might live and work and study. Thus, since the children will be almost entirely boarding students, it is planned to build family type cottages which will be occupied by surrogate parents (both young and old), and each set of "parents" will have approximately six children of various ages as their "family". The family may also have its own natural children, so conceivably the total may be more than six children. The cottages should be large enough, therefore, to accommodate a family of as many as 10 persons and should include full living quarters. Approximately 20 of these cottages will be needed at the school site.

Space No.	Space	Function and Relationships General Characteristics
42.	Max Cochran Laboratory School Administrative Office	An office for the principal of the school will need to be built in a central location at the school. It should include his office, a conference room and space and facilities for the secretary, and mimeograph and storage space.
43.	Max Cochran Laboratory School Nurses Station	A small office for the nurse should be included. This should also include a small sick bay and lavatory. This facility could be attached to the administrative office.
44.	Max Cochran Laboratory School Farm	A small fenced-in area with a large red barn and other appropriate buildings should be provided. This farm would be used to actually house specimens of farm animals such as cows, horses, sheep, pigs, chickens, ducks, and the like. It would also provide facilities for small scale gardening experiences. This farm should be located in the general school area according to whatever health regulations permit. It is intended to give children experiences with the care and feeding of animals, to provide products for food preparation, and similar related experiences.
45.	Max Cochran Laboratory School Store – Commissary	This facility would actually be a small store which would give the children and their "families" real experiences in shopping for certain staple foods and other necessary products. It would be stocked from the central administrative commissary. (Actual meals would be prepared and served to the children in the family units – cottages). Chill box and walk-in refrigerator must be included.
46.	Max Cochran Laboratory School Multi-Purpose Auditorium	A multipurpose room with a capacity of 250 should be provided at the school site. It would serve for special school functions and it would serve as a community center for the families and children who live at the school. It could be used for activities on days when the weather was inclement and the children could not be out of doors. It could be used for feeding large groups of people, including some meals served at school to all children, and for games and other purposes. It should include kitchen and serving facilities. It should include also a stage with appropriate lighting and sound reproduction facilities.
47.	Max Cochran Laboratory School Visitors' Cottages	Six individual cottages should be provided at this site for parents and others who come to visit and remain for overnight or longer.
48.	Max Cochran Laboratory School Outdoor Play Area	To the fullest extent possible, the out-of-doors should be planned and utilized for play and study. Through the use of natural areas and terrain and through carefully planned plantings, all natural areas should be maximal instructional advantages. This would include such considerations as meadows for playing, water for wading, quiet areas for contemplation, beautiful vistas to enjoy (or to paint or to interpret in music), trees to climb (or to lie under), and trails to hike. The use of shelters as learning areas needs to be considered.

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II. ENVIRONMENTAL CENTER
C. DETAILED SPACE REQUIREMENTS

Group	Facility Function
B	Environmental Center

Space No.	Space	No. of Spaces	Capacity Ea. Space	Net Area
	CLEMMIE GILL SCHOOL OF SCIENCE AND CONSERVATION			
	1. Library			
B1.1	Reading Room	1	60	1200
B1.2	Conference Room	1	20	400
B1.3	Office-Workroom	1	4	300
				1900
	2. Office and Lounge			
B2.1	Principal's Office	1	5	150
B2.2	Reception & Secretary	1	3	150
B2.3	Lounge	1	40	800
B2.4	Teacher's Workroom and Supply	1	–	400
				1500
	3. Bakery (Addition to John Muir Lodge)			
B3.1	Bakery	1	–	300
B3.2	Deep Freeze Facility	1	–	150
				450
	4. Dispensary			
B4.1	Nurse's Office	1	2	150
B4.2	Blanket Storage	1	–	150
B4.3	Restroom	1	–	GSC
				300
	5. Administrators' Houses			
B5.1	Director (Environmental Center)	1	Family	2200
B5.2	Principal (Clemmie Gill School)	1	Family	2200
B5.3	Astrophysical Supervisor	1	Family	2200
B5.4	Laboratory School Principal	1	Family	2200
				8800
	6. Staff & Guest Housing			
B6.1	Housing	1	50	7500
	7. Teachers' Housing			
B7.1	Exeter House	1	To be completed	
B8.1	**8. Ramadas**	6	35	6900
B9.1	**9. Trail Shelters**	6	20	2700
B10.1	**10. Lath House**	1	–	10000
B10.2	Garden House Ramada	1	35	

II. Environmental Center
C. Detailed Space Requirements

Group B — Facility Function: Environmental Center

Space No.	Space	No. of Spaces	Capacity Ea. Space	Net Area
B11.1	**11. Life Science Building**	1		
B11.2	Research Workroom	1		2000
B11.3	Chemistry Lab	1	–	1200
B11.4	Biology Lab	1	–	1200
B11.5	Museum (Natural History)	1	–	12000
	12. Environmental Research Laboratory			
B12.1	Offices	6	1	720
B12.2	Library	1	6	250
B12.3	Shop	1	6	250
B12.4	Lath houses	3		3000
B12.5	Greenhouse	1		800
B12.6	Research plots	1		10000
B12.7	Equipment shed	1		2000
			Total	66620

LISTENING HILL VILLAGE

Space No.	Space	No. of Spaces	Capacity Ea. Space	Net Area
B13.1	**13. Student Housing**	5	20	5000
B14.1	**14. Multi-Purpose Dining**	1	100	2100
B15.1	**15. Library**	1	35	950
	16. Dispensary			
B16.1	Nurse's Office	1	2	150
B16.2	Blanket Storage	1	–	150
B16.3	Restroom	1	–	GSC
				300
B17.1	**17. Toilets and Showers**	1	100	3000
	18. Staff Housing			
B18.1	Staff Quarters	1	20	3000
B18.2	Cooks' Quarters	2	2	670
B18.3	Assst. Principal's Quarters	1	1	200
B18.4	Commons Room	–	–	500
				4370
	19. Teachers' Workshop & Lounge			
B19.1	Lounge	1	20	400
B19.2	Workshop	1	–	300
B19.3	Kitchen	1	–	100
B19.4	Restroom	1	–	50
				850

II. Environmental Center
C. Detailed Space Requirements

Group	Facility Function
B	Environmental Center

Space No.	Space	No. of Spaces	Capacity Ea. Space	Net Area
B20.1	**20. Village Chief Quarters**	**2**	**2**	400
	21. Practice Rooms			
B21.1	Practice Rooms	2	75	3000
B21.2	Practice Rooms	2	35	1400
B21.3	Practice Rooms	2	15	600
				5000
B22.1	22. Audio-Visual Facility	1	–	400
			Total	22370

ASTROPHYSICAL LABORATORY FACILITY

Space No.	Space	No. of Spaces	Capacity Ea. Space	Net Area
B23.1	**23. Major Observatory**	1 37 in. reflector telescope 24 ft. dia. dome		900
B24.1	**24. Lesser Observatories**	Smaller reflector		
B24.2	Lesser Observatories	1 Smaller reflectors		
B24.3	Lesser Observatories	1 Refractor		
B24.4	Lesser Observatories	1		1800
B25.1	**25. Observatorium**	1	120	2400
B26.1	**26. Planetarium**	1	120	3600
B27.1	**27. Auditorium & Earth Science Exhibit Hall**	1	120	2400
B28.1	**28. Laboratory & Lens Grinding**	1	–	500
B29.1	**29. Solar Tower**	1	–	250
B30.1	**30. Camera Obscura**	1	20	600
B31.1	**31. Foucault Pendulum**	1	–	250
B32.1	**32. Darkroom**	1	–	400
B33.1	**33. Maintenance Shops**	1	–	400
B34.1	**34. Reception & Secretary**	–	3	150
B34.2	Supervisors' Office	–	3	200
B34.3	Associates' Offices	6 @ 150	3	720
B34.4	Office & Research	1	3	150
B34.5	Conference Room & Kitchen	1	12	240
				1520
B35.1	**35. Public Restrooms**	To be included in Planetarium and Auditorium		GSC

II. Environmental Center
C. Detailed Space Requirements

Group B — Facility Function: Environmental Center

Space No.	Space	No. of Spaces	Capacity Ea. Space	Net Area
B36.1	**36. Research Library**	1	–	400
B37.1	**37. Supervisor's Apartment** Living-sleeping, bath, kitchenette, closet	–	–	400
B38.1	**38. Staff & Guest Housing** 2 per room 6 @ 300	1	12	1800
B39.1	**39. Student Housing**	1	20	1000
			Total	18620
	MAX COCHRAN LABORATORY SCHOOL			
	40. Lofting Area (large building)			12000
B40.1	Classrooms) open —	6	25	
B40.2	Kindergarten)	1	25	
B40.3	Nursery School) space	1	25	
B41.1	**41. Cottages for Students**	20 @ 1300	10	26000
B41.2	Cottage for Principal	1	6	1300
B41.3	Cottage for Nurse	1	6	1300
	42. Administrative Offices			
B42.1	Office	1	2	150
B42.2	Secretary	1	2	150
B42.3	Conference Room	1	7	150
B42.4	Storage & Mimeo	1	–	150
				600
	43. Dispensary			
B43.1	Nurse's Office	1	2	150
B43.2	Cot Room	1	1	100
B43.3	Toilet and Storage	1	–	50
B44.1	**School Farm** Cow Barn Sheep Pen Chicken House Grist Mill Hut Dove cote Horse Barn Pig Pen Hay Barn Wagon house and implement storage Duck pond	1	3 acres	3750
B45.1	**45. School Commissary**	1	–	480
B46.1	**46. Multi-Purpose Auditorium with Kitchen and Stage**	1	250	5000
B47.1	**47. Visitors' Cottages**	6 @ 600	4	3600
			Total	54330

III. FACILITY FOR THE RESEARCH OF HUMAN BEHAVIOR

A. Site: Hilly enfolded area across the road west of Listening Hill. This center is conceived of as one where teachers, psychologists, sociologists, anthropologists and other specialists will come to study human behavior. It will be a place where scholars engage in discussions and study, where professors and fellows come to do research. It will be a laboratory for studying human interaction and behavior. It will utilize the services of a resident staff and also of scholars in residence. It will utilize the resources of other centers, particularly those of the Humanities Center and the Center for Environmental Studies. The Laboratory School will provide children for special studies. It will also function as an educational service agency, providing new and deeper insights and understandings for all who are concerned with human development and relationships. It is with such objectives in mind that the Center should be planned.

Access

Topography and Drainage – hilly

Soil Composition – decomposed granite, rock

Signs – directional

Lighting – for safety

Drinking Fountains – strategically located

Trash Containers – unobtrusive

Special Consideration (see above)

B. Planning

Buildings: A central building, seminar rooms and housing perhaps built around large patio or courtyard.

C. Space

Building should be flexible, especially Central building. Sizes are approximate.

III. Facility for the Research of Human Behavior

A. SITE REQUIREMENTS

Activity	Space or Function
Research-Demonstration	Site to be developed with one main central building, housing
Recreation	Outdoor quiet areas, courtyards, patios. Quiet Trail areas and vistas should be planned for this area. These might be built along trails in the forest, by the stream, overlooking mountain vistas or in similar circumstances. They might involve primitive shelters or they may simply involve rustic seats and tables under a tree or something similar
Auto Access	One way road off main road.
Parking	**Parking** temporary for five cars.
Trails	Footpaths connecting with other centers.
General Landscaping	Developed with consideration of erosion control; natural appearance of area preserved; plants indigenous to area used.
Lighting	Lighting for safety at night.

B. PLANNING REQUIREMENTS

Space No.	Space	Function and Relationships General Characteristics
1.	Central Building	The heart of this facility is to be a large central complex, perhaps 60 x 100 feet in size. It may be a two-story building with a sheltered, screened roof garden on top of the second story. The bottom floor of the building will be an auditorium with multi-purpose functions. It will have a flat floor with flexible use indicated, permanent stage with provisions for sound amplification and lighting, and a kitchen facility attached or part of the building. A large fireplace will occupy the other end. Adjoining the main auditorium will be rooms on each side with sliding doors or partitions which can be opened and these rooms can then become part of the auditorium for large meetings and conferences. Normally they will function as conference rooms or small meeting rooms or seminar rooms, or, in some cases, they may be offices on a temporary basis. In each instance these side rooms will have sliding glass doors to the outside, and the outside will consist of walled off garden areas which are attractively planted and become, in effect, extensions of the rooms. The occupants can move into these outdoor quiet areas to work, for conferences, or for meditation. Simple tables and benches can be provided.
2.	General Lounge	A large and spacious lounge (capacity 150) should be provided for general center use by residents and visitors. It should be light and airy with comfortable facilities for visiting, resting, quiet conversation, writing letters, reading, tea, and similar activities. It should be separate from the main center building. It should have a small food preparation area for preparing coffee and snacks. Restrooms to be provided.
3.	Staff Lounge	A smaller staff lounge (capacity 25), quite similar to the general lounge described above, should be provided for staff use and conferences and relaxation. It should

Space No.	Space	Function and Relationships General Characteristics
		also have another room which is equipped as a staff workroom. This staff workroom should have a small research library incorporated into it with approximately six individual carrels for study. This research library would not be available for general use, but it would contain specialized books and periodicals useful for those who were working at the Center. Included also would be a data retrieval and storage system. The lounge should also be equipped for film projection and preview.
4.	Seminar Rooms	Set apart from the main center facilities should be a series of seminar rooms of different capacities. Four are suggested with capacities for 8, 15, 15 and 30 persons. These might be located around a central core which is attractively landscaped to provide privacy for outdoor conferences also. These rooms would be available for seminars and might also be used for special testing, observation, conferences and for many purposes. They should be appointed and furnished to make them maximally attractive and friendly.
5.	Staff Housing	Staff housing for a minimum of 50 persons should be provided at this site. These should be dormitory type facilities, perhaps similar to a two story motel design with a commons area. Minimal dining facilities for 50 persons should also be provided at this location. Provided also should be two or three private cottages or apartments for special scholars in residence who would wish and need to have a more private facility for living and working.
6.	Director's House	A residence for the Director of the Facility might be provided at this site. This should be similar in design to the ones which are provided for the other centers.
7.	Outdoor Quiet Areas	Quiet trail areas and vistas should be planned for this area. These might be built along trails in the forest, by the stream, overlooking mountain vistas or in similar circumstances. They might involve primitive shelters or they may simply involve rustic seats and tables under a tree or something similar.

Group C — Facility Function
Facility for Research of Human Behavior

Space No.	Space	No. of Spaces	Capacity Ea. Space	Net Area
C1.1	Central Building	1	–	12000
C1.2	Offices	6	3	
C2.1	General Lounge	1	150	3000
C2.2	Snack Kitchen	1	–	150
				15150
C3.1	Staff Lounge	1	25	500
C3.2	Workroom & Research Laboratory	1	–	350
				850
C4.1	Seminar	1	8	160
C4.2	Seminar	2	15	600
C4.3	Seminar	1	30	600
				1360
C5.1	Staff Housing Dormitory	1	50	15000
	Kitchen-Dining	1	50	
C5.2	Cottages—Apartments	3 @ 800	3	2400
C6.1	Director's House	1	Family	2200
			Total	36960

IV. CONFERENCE AND STUDENT CENTER

A. **Site:** on top of Eric's Hill, west of present 65 acres. The Conference Center is projected as that arm of the campus which will serve both large and small groups of people who come to the campus for many purposes – to hold professional meetings, for specialized study and for many other reasons. They may or may not be connected with some aspect of ongoing activity at one or more of the centers. Many groups would come because this mountain is an attractive and inspirational setting to hold their meetings or to conduct their studies. It will be a facility which enables them to meet, to participate in their programs under circumstances which are adequate to their needs and in an atmosphere which is relaxed and pleasant. There will be opportunities for both work and play.

Access from main gate road to be developed from gate direct to site.

Topography and drainage – hilltop plateau.

Soil Composition – decomposed granite

Signs – directional and informational

Lighting – for safety

Drinking fountains – strategically located

Trash containers – unobtrusive

Student Center

Special considerations (see below)

B. **Planning**

Buildings necessary to a conference center. Student Center should be a low cost facility for students with little funds for accommodations, but pleasant and comfortable. All buildings should take advantage of views into valleys, and site laid out to make maximum use of beauty of hilltop site. Care should be taken to shield light form Observatory.

C. **Space – sizes are approximate.**

IV. Conference Center

A. Site Requirements

Activity	Space or Function
Auto Access and Circulation	From Main Gate two-way road (for buses to pass) Service Roads
Parking	Covered, unloading bus docks. A secluded parking area for guests should be provided. This should have capacity for 200 cars. A minimal one-way road system with provision for service access and for the initial entry and final egress of cars of guests should be provided. While they are on the campus grounds, their baggage and they will be transported about the conference center grounds and to other centers by small electric vehicles. There will be no cars in the general areas. Small sheltered waiting stations will need to be provided at the conference grounds and at various locations around the campus.
Signs	Minimal, discreet, directional.
Topography and Drainage	
Soil Composition	Sierra soil
General Landscaping	Developed with consideration of erosion control; as far as possible trees should remain; natural plants used; general appearance natural.
Special Consideration	To take optimal advantage of view.
Lighting	For safety at night, obscured as much as possible from direction of astro facility and Observatory Hill.
Trash containers	Unobtrusive
Sewage Disposal	
Quiet Areas	Seats in nooks or natural beauty sites; along trails; at viewpoints.
Drinking Fountains	Strategically located.

IV. Conference Center

A. Site Requirements

Activity	Space or Function
Recreation	(a) Swimming pool and sun bathing area
	(b) Campfire and picnic area with barbecue facility
	(c) Large patio areas
	(d) Sports areas
	(1) Volleyball
	(2) Shuffleboard
	(3) Etc.
	(e) Amphitheater

B. Planning Requirements

Space No.	Space	Function and Relationships General Characteristics
1.	Conference Hall	This facility will be a large conference hall with a capacity of 450 persons. It will be equipped with a stage and all necessary sound and audio-visual facilities, including closed circuit television. It will be a flexible building with a flat floor which can be used for a variety of purposes. Dressing and orchestra rooms adjacent.
(b)	Dressing and Orchestra Rooms	
2.	Dining Halls	A companion building to the Conference Hall will be a large dining hall with a capacity of 350 persons for dining. It will be served by an adjoining kitchen with all necessary facilities including a bakery, deep freeze, storage facilities, and all other required elements. Adjoining the large dining hall will be a smaller auxiliary dining hall with a capacity of 100 persons. Both will be served by the common kitchen.
(a)		
(b)		
(c)		Staff Dining Room: A small staff dining room with a capacity of 50 persons will be at this same site with service being provided from the main kitchen.
3.	Guest Housing	Guest housing for 350 persons will need to be provided. This will be of a variety of styles. Most will be housed in dormitory type buildings with multiple occupancy. There will, however, also be semi-private and some private rooms available. Some will be equipped with baths, but separate group shower and toilet facilities also will need to be available for those using the dormitory. Multiple story buildings as well as cottages will be available.
	Student Center	Housing facilities for 100 students, dormitory type. Lounge rooms and small meeting rooms. Kitchenettes on each floor or cluster.
4.	Staff Housing	Staff housing for 25 persons will need to be available. This will be of a type similar to that provided at the other centers. A commons area for staff use will need to be included.
(b)	Cooks' Quarters	Facilities for 10 cooks

IV. Conference Center

B. Planning Requirements

Space No.	Space	Function and Relationships General Characteristics
3.	Guest Housing	Guest housing for 350 persons will need to be provided. This will be of a variety of styles. Most will be housed in dormitory type buildings with multiple occupancy. There will, however, also be semi-private and some private rooms available. Some will be equipped with baths, but separate group shower and toilet facilities also will need to be available for those using the dormitory. Multiple story buildings as well as cottages will be available.
	Student Center	Housing facilities for 100 students, dormitory type. Lounge rooms and small meeting rooms. Kitchenettes on each floor or cluster.
4.	Staff Housing	Staff housing for 25 persons will need to be available. This will be of a type similar to that provided at the other centers. A commons area for staff use will need to be included.
	(b) Cooks' Quarters	Facilities for 10 cooks.
5.	Director's House	A house for the director of the conference center will need to be provided. This should be located in a somewhat secluded area of the center, and it should be sufficiently spacious that he may entertain distinguished guests there from time to time.
6.	Little Theater	A small theater with a capacity of 100 persons will need to be provided. This facility will be primarily for the screening of movies of both an educational and entertainment nature, but it will also be available for meetings, plays, etc.
7.	Seminar Rooms	Eight such rooms should be provided. These should range in capacity from 50 to 100 persons. All should be equipped with closed circuit television.
8.	Meditation Area	A quiet area for individual or group use should be provided. This may be indoor or outdoor, or it may combine both. It could be used, for example, as a chapel by religious groups who come to the center or simply for quiet thoughts and meditation by anyone who wished to use it. The outdoor area should utilize a secluded setting and careful plantings to achieve an atmosphere of quiet and serenity and beauty. Perhaps whatever building is established should be such that it opens out onto such a gardenlike setting.
9.	Lounge	For conviviality in recreation area; food dispensing machines.
10.	Game Room	In recreation area.
11.	Reading Room	In recreation area.
12.	Reception Center and General Offices	Adjoining the main lounge and close to the guest quarters there should be an attractive reception center where guests check in and out, where bookings are confirmed and where information is available. This facility should also have the necessary offices which are concerned with the administration and management of the center with office space for the director and his associates and for the necessary secretarial and fiscal affairs of the center.
13. 14.	Storage and Maintenance	Adequate areas for the storage of supplies, food, linens and other requisite materials and equipment should be provided. These areas or structures should be in a secluded place with easy access to the administrative center. A utilities area should also be provided. Roofed area for equipment parking.
15.	Radio and Television Studio	A small but well equipped radio and television studio with provision for broadcasting and telecasting to all parts of the campus and tied in to the campuswide closed circuit

IV. Conference Center

B. Planning Requirements

Space No.	Space	Function and Relationships General Characteristics
	Radio and Television Studio (Cont.)	system will need to be provided at this site. ETV setup with stage settings and audience viewing should be arranged.
16.	Exhibit Hall	Facilities for exhibiting locally developed and/or commercially developed exhibits; close to main conference hall. Must have a very large storage and property basement.
17.	Security Personnel Station	A "home base" for security personnel who will serve the entire campus will need to be developed at this site. It can be a modest small facility with whatever equipment such a facility normally requires. Located in maintenance area. Two bedrooms and office.
18.	Outdoor Amphitheater Facilities for 350	

C. Space Requirements

Group D — Facility Function: Conference Center

Space No.	Space	No. of Spaces	Capacity Ea. Space	Net Area
D1.1	Conference Hall	1	450	9000
D1.2	Dressing Rooms	3	15	900
				9900
	Dining Halls			
D2.1	Dining Hall	1	350	5250
D2.2	Dining Hall	1	100	1500
D2.3	Staff Dining	1	50	750
D2.4	Kitchen	1	–	5600
				13100
D3.1	Guest Housing	1	350	52500
D4.1	Staff Housing	1	35	5250
D4.2	Commons Room	1	35	700
D3.2	Student Center	1	100	5000
D5.1	Director's House	1	Family	2200
D6.1	Little Theater	1	100	4000
D7.1	Seminar Rooms	1	100	2000
D7.2	Seminar	4	50	1000
D7.3	Seminar	4	30	600
				3600
D8.1	Meditation Area	1	50	1500
D9.1	Lounge	1	–	1600

IV. Conference

C. Detailed Space Requirements

Space No.	Space	No. of Spaces	Capacity Ea. Space	Net Area
D10.1	Game Room	–	–	1600
D11.1	Reading Room	1	–	600
	Reception Center			
D12.1	Director's Office	1	3	150
D12.2	Business Office	1	3	150
D12.3	Housekeeper's Office	1	3	150
	Food Service	1	2	
D12.4	Office	1	3	150
D12.5	Reception & Secretary	1	3	150
D12.6	Lounge	1	50	1000
				1750
	Storage			
D13.1	Food	1	–	2400
D13.2	Linens	1	–	600
D13.3	General Supplies	1	–	1000
				4000
	Maintenance			
D14.1	Equipment	–	–	4000
D14.2	Janitorial	–	–	800
D15.1	Radio and ETV Studio	1	–	3000
D16.1	Exhibit Hall	1	–	4000
D16.2	Storage Basement	1	–	2000
D17.1	Security Personnel Station	1	–	500
				121600

V. HUMANITIES CENTER

A. **Site:** SW of tree farm up hill and into small canyon. This Center will provide a home and facilities for creative artists, both professionals and amateurs. Here they can create in a variety of forms and test the integrity of their creative impulses. It will be concerned with seminal expression and also with interpreting the expression of others in various forms of performance. It will provide for the graphic arts and crafts, for musical expressions, the dance, and for creative writing, and indeed, for whatever forms man uses to express his thoughts and emotions. Although it is located in its own separate center, it will be vitally concerned also with the ongoing activities of the other centers.

Access – off main road, across Bear Creek

Topography and drainage – slight slope, hilly terrain - terraced, guttered

Soil Composition – Alpine and/or Sierra soil

Signs – Directional

Lighting – for safety

Drinking fountains – strategically located

Trash containers – Unobtrusive

Special considerations – Area left as natural as possible

B. **Planning** – Buildings to blend in with natural outdoor setting; aesthetics of site most important, and outdoor sites used to fullest extent.

C. **Space** – sizes are approximate

V. Humanities Center

A. SITE REQUIREMENTS

Activity	Space or Function
Access and Circulation	Points of access to the campus should be clear and located to promote orderly circulation with one way loop roads. Circulation to avoid ambiguity and conflict. Vehicular traffic as much as possible to be kept out of living/dining areas. All parking at main lot.
Trails	Trail system developed to include foot paths (black topped) for general in-site pedestrian traffic.
General Landscaping	Developed with consideration of erosion control; as far as possible, natural appearance of area should be preserved; plants indigenous to area used.
Lighting	For safety at night.
Quiet Areas	Seats in natural nooks or beauty sites.
Courtyards/Patios	In connection with each building.
Foot Bridges	At necessary places to cross creek.
Recreation	Barbecue area with picnic tables.

B. PLANNING REQUIREMENTS

Space No.	Space	Function and Relationships General Characteristics
1.	Main Building	This will be a large, unique, well-equipped theater for drama and for musical productions and concerts. It should have a seating capacity of 800 persons and should be complete with a ticket office, lounge, foyer and all of those elements commonly associated with a first-class theater for the performing arts. It should have projection facilities, a scene shop, stage workshop, prop storage facilities, costume room, makeup rooms, dressing rooms. It should have a White Oaks theatre concept. This building also should include choral rooms and instrument storage rooms, orchestra practice rooms and a room for housing a music library. It should have instrument ensemble rooms.
2.	Involvement Area Clusters	Special involvement areas for those who are exploring in various phases of creative expression need to be built. These should include facilities for drawing and painting, printing and crafts, sculpture, ceramics and jewelry making, photography and cinema, TV and writing, prose, poetry. Each area should provide working space for 30 persons.
3.	Dance Clusters	Demonstration and performance areas for the dance need to be provided. These should be several in number and require a small stage, floor space and facilities for musical reproduction with minimal audience.
4.	Construction Clusters	These are regarded primarily as technical areas, and they should include woodshops, arts and crafts centers, furniture construction areas and a center for architectural design and construction. This area should include a casting shop for resins, plaster and cement and a metal shop for cutting and welding. It should include a smelting furnace.

V. Humanities Center

B. Planning Requirements

Space No.	Space	Function and Requirements General Characteristics
5.	Lecture Rooms	Four such rooms of various capacities should be provided (25, 50, 50 and 100). There should be a small stage in one of the large rooms. All should have sound reproduction facilities. All should be connected by courts and gardens.
6.	Individual Studios	These are regarded as rather isolated studios with minimal living quarters. Nine of these should be available for artists in residence.
	Get Lost Studios	Fifteen smaller satellite studios, primitive workrooms, bare.
7.	Open Shelters	Several open shelters where participants can work in environmental settings. Simple roofs to keep out the rain. Several person capacity – not to exceed 12.
8.	Staff and Guest Housing	Guest housing for 50 persons. Dormitory style facilities with dining facilities available for 100 people including staff.
9.	Staff Housing Intern	Staff housing for 25 of a style to be found at the other centers.
10.	Director's House	Of a style and size found at the other centers.
11.	Outdoor Amphitheater	An outdoor amphitheater for performing groups with a seating capacity of 600 should be provided at this center. It should have stage capacity for performances in music and dance and drama. It should have adequate dressing rooms adjoining the stage area and adequate sound reproduction and lighting facilities.
12 & 13.	Outdoor Amphitheater	Two small outdoor amphitheaters with seating capacities of 30 and 50 students and minimal night lighting should be provided for small group performances.

C. SPACE REQUIREMENTS

Group E **Facility Function** **Humanities Center**

Space No.	Space	No. of Spaces	Capacity Ea. Space	Net Area
	Theatre and Music Building			
E1.1	Theater	1	800	32000
E1.2	Ticket Office	1		
E1.3	Lounge	1		
E1.4	Foyer	1		
E1.5	Scene Shop	1		
E1.6	Stage Workshop	2		
E1.7	Property Storage	1		
E1.8	Costume Room	1		
E1.9	Makeup Rooms	2		
E1.10	Dressing Rooms	6	–	2400
E1.11	Choral Rooms	2	–	1200
E1.12	Instrument Practice Room	1	–	1600
E1.13	Orchestra Practice Room	1	–	600
E1.14	Music Library	1	–	400
E1.15	Instrument Ensemble	4		
				38200

V. Humanities Center

C. Detailed Space Requirements

Space No.	Space	No. of Spaces	Capacity Ea. Space	Net Area
	Involvement Areas			
E2.1	Drawing	2	30	2400
E2.2	Painting	2	30	2400
E2.3	Printing and Crafts	2	30	2400
E2.4	Sculpture	2	30	2400
E2.5	Ceramics & Jewelry	1	30	1200
E2.6	Photography	1	30	1200
E2.7	Cinema & Television	1	30	3000
E2.8	Writing	2	30	2400
				17400
	Dance Clusters			
E3.1	Little Theater	1	–	3000
E3.2	Performance Areas	2	–	6000
E3.3	Performance Areas	2	–	3000
				12000
	Construction Clusters			
E4.1	Woodshop	1	12	600
E4.2	Arts and Crafts	1	40	2000
E4.3	Architectural Design & Construction	1	12	600
E4.4	Casting Shop	1	6	300
E4.5	Metal Shop	1	6	300
				3800
	Lecture Rooms			
E5.1	Lecture	1	25	500
E5.2	Lecture	2	50	1000
E5.3	Lecture	1	100	2000
				3500
E6.1	Resident Studios	9	1	4140
E6.2	Get Lost Studios	15	1	5100
E7.1	Open Shelters	6	12	1440
E8.1	Staff & Guest Housing	1	50	7500
E8.2	Dining	1	100	1500
E8.3	Kitchen	1	–	1130
				10130
E9.1	Staff Housing (Intern)	1	25	3750
E10.1	Director's House	1	Family	2200
				101660

SUMMARY SPACE REQUIREMENTS

Group	Activity	Net Area	(Factor)	Gross Area
A	Admin. Center	61600	1.35	83160
B	Environmental Center			
	Clemmie Gill School	62620	1.20	75140
	Listening Hill Village	22370	1.26	28280
	Astrophysical Lab	18620	1.33	24770
	Max Cochran Lab School	54330	1.11	60310
	Environmental Research Lab	TBD[1]		
C	Facility for Research-Human Behavior	36810	1.37	50430
D	Conference Center	121600	1.42	172670
	Student Center			
E	Humanities Center	101660	1.40	142320
	Total	479610		637080

SECTION V

FUTURE OF SCICON

Long Range Planning Program

Recommendations for Site Development
and Facilities

Long Range Planning Program

A. Site

Description

The present property of 65 acres is located in the foothills of the Sierras at an elevation of approximately 2000 ft. It is at the upper end of the Bear Creek Valley and is bounded on the east by the Sequoia National Forest and on the north, west and south by private property.

The terrain varies from flat to steeply sloping and is partly open and partly covered with a variety of deciduous and evergreen trees.

The site is traversed by Rancheria Creek and the South Fork of Bear Creek. The watershed is well drained to the creeks, however, there has been a history of flooding along the creek bottom where the creek has overflowed its banks.

Access

Access to the site is by paved two-lane road from Springville to the South West. From Springville, State Sign Route 190 continues west to Porterville and then to U.S. Highway 99 at Tipton.

Additional Property

In order to expand the facilities as outlined herein and to protect the natural environment around **SCICON** from encroachment and damage, additional Forest Service property on the east in the amount of 130 acres, and private property on the north, west and south in the amount of 1880 acreas should be obtained. The master plan shows the location and extent of additional property needed.

Site Development

All centers except the Conference and Maintenance Centers are grouped around an open valley at the lower end of which is the picnic and barbecue area. Each center is sited on a natural bench or open slope which gives an outlook over the valley and catches the prevailing breezes. The centers are dispersed along a loop road which provides access for service and emergency vehicles. The area within the loop is reserved for pedestrian traffic and nature trails radiate out from the loop.

A security entrance station at the junction of **SCICON** Road with the county road will enable visitors to obtain directions on how to proceed.

The Reception Area and main parking area is the next point of contact on the **SCICON** Road and will handle reception and check-in for visitors. It is at the head of the valley and it is here that the loop road branches in two directions.

Traveling east on the loop road, one next comes to the Astrophysical Facility which is grouped around the hill on which is located the existing telescope.

Listening Hill Village is next as one goes down the east side of the valley. Its location takes advantage of a natural amphitheatre and rock outcroppings for outdoor listening.

At the bottom of the valley in a central location adjoining the existing Clemmie Gill School is the Administrative Center for the entire **SCICON** Complex.

The Humanities Center is removed to the South, across Bear Creek, where it is situated on a rising slope affording a panorama view back up the valley.

The Max Cochran Laboratory School, Facility for the Research of Human Behavior, and Environmental Research Facility are grouped on the west side by the valley.

The Conference and Student Center is located on top of the ridge to the west. This center will have a 360 degree panorama view. Care should be taken to shield the lighting at night so that it does not interfere with the telescopes at the Astrophysical Facility.

The Maintenance Area and Botanical Gardens are located in the new area to be acquired from the Federal government. This will be across the creek to the east, screened from view.

Vehicular traffic on the loop road is kept to a minimum by providing small buses on a regular schedule to transport people from center to center. Cars belonging to visitors or staff are left in parking areas at three locations: The Administrative Center, the Conference Center, and the Entrance and Reception Center.

In order to preserve the natural appearance of the site, road width is kept to a minimum. Parking is terraced. Existing trees and rock outcroppings are not disturbed. The buildings will be low and stepped to the terrain in order to avoid scarring the slopes.

Topographical data for master planning was obtained from USGS maps. The 40 ft. countour interval on these maps does not show the small benches, ridges, and hills which are apparent when walking about the site. The new centers were located by visual inspection on site. Before any further detailed planning can proceed, a site survey must be obtained at a contour interval of 5 ft. In addition, at the building areas, contours should be filled in at 1 ft. intervals.

B. Utilities

A detailed study of utilities is beyond the scope of this report. Such a study should be undertaken at the time that further planning goes ahead.

There is an existing overhead power line running down the open valley around which the future Centers are planned. This power line should be placed underground, or rerouted overhead to the west side of the open valley, beyond the loop road.

Piped natural gas is not available. A determination should be made as to the availability in the future. Heating and cooking is presently done with electricity or bottled gas.

Water is obtained from nearby springs and is distributed in a private on-site system which is subject to shutdown from freezing. When the facilities are expanded, proper storage capacity should be provided for domestic and emergency use and suitable all year loop distribution system installed.

Sewage is presently handled by means of separate septic tank systems. A permanent sewage collection system and treatment plant should be planned for the new facilities, which could be built in increments and tied in with each phase of construction.

There is no telephone service on the site. Radio is used in the event of emergency to contact the nearest Sheriff's office.

C. Climate

Temperature

Extreme high	112	degrees
Summer high (average)	91	"
Winter low (average)	38	"
Extreme low	18	"

Precipitation

Average yearly rainfall	35 inches
Average yearly snowfall	2/12 feet

Wind

Prevailing wind from NW
Storm wind from NW

D. Cooperating Development Agencies

Building	Tulare County Building Department
Sanitation	Tulare County Health Department
Power	Southern California Edison
Fire	State Fire Control
Police	Tulare County Sheriff's Department

E. Facility Criteria and Standards

Site Work

1) Cut and fill to be kept to a minimum to avoid scarring the natural slopes.

2) Quick access to all centers to be provided for fire fighting equipment.

3) Roads should be well drained to ditches and culverts to avoid washouts.

4) Parking areas located on slopes should be terraced. Each terrace to accommodate not more than two rows of cars to minimize cut and fill and size of asphalt areas.

5) Exterior lighting at parking lots, roads, buildings, and walks should be kept as low as possible, shielded above and directed downward. Care should be taken to avoid interference with visibility through telescopes at Astrophysical Lab.

Buildings

1) Buildings should be kept low in scale, mostly one story, and a maximum of two stories where necessary in order to harmonize with surroundings.

2) Exterior and interior materials should be low maintenance and fire resistive. Wood should be fire resistive treated, walls of masonry where possible: brick, block, concrete or slump stone. Windows should be metal.

Recommendations for Site Development and Facilities (Master Plan)

The accompanying **Master Plan** map indicates existing facilities and features at the **SCICON** site and projects proposed sites and facilities for the campus. Some are rather self-explanatory, but others may need some interpretation.

Essentially, the master plan proposes the planning and development of four major centers to be included at the **SCICON** site. These will consist of complexes of closely knit clusters of buildings which will be located on natural benches or gentle, open slopes. All construction will be in harmony with the surroundings of the campus. Subsumed under the Environmental Education Center will be several ancillary facilities or activity areas. The four centers which are projected for this area and which are identified on the master plan map are as follows: (Numbers in parentheses following each item indicate locations on the map)

I. **Administrative-Operational Center** (4)
  a. Reception Center (1)
  b. Swimming pool, picnic and barbecue center (7)
  c. Maintenance and botanical gardens (12)
  d. Security entrance stations (13)
  e. Heliport (14)

II. **Humanities Center** (6)

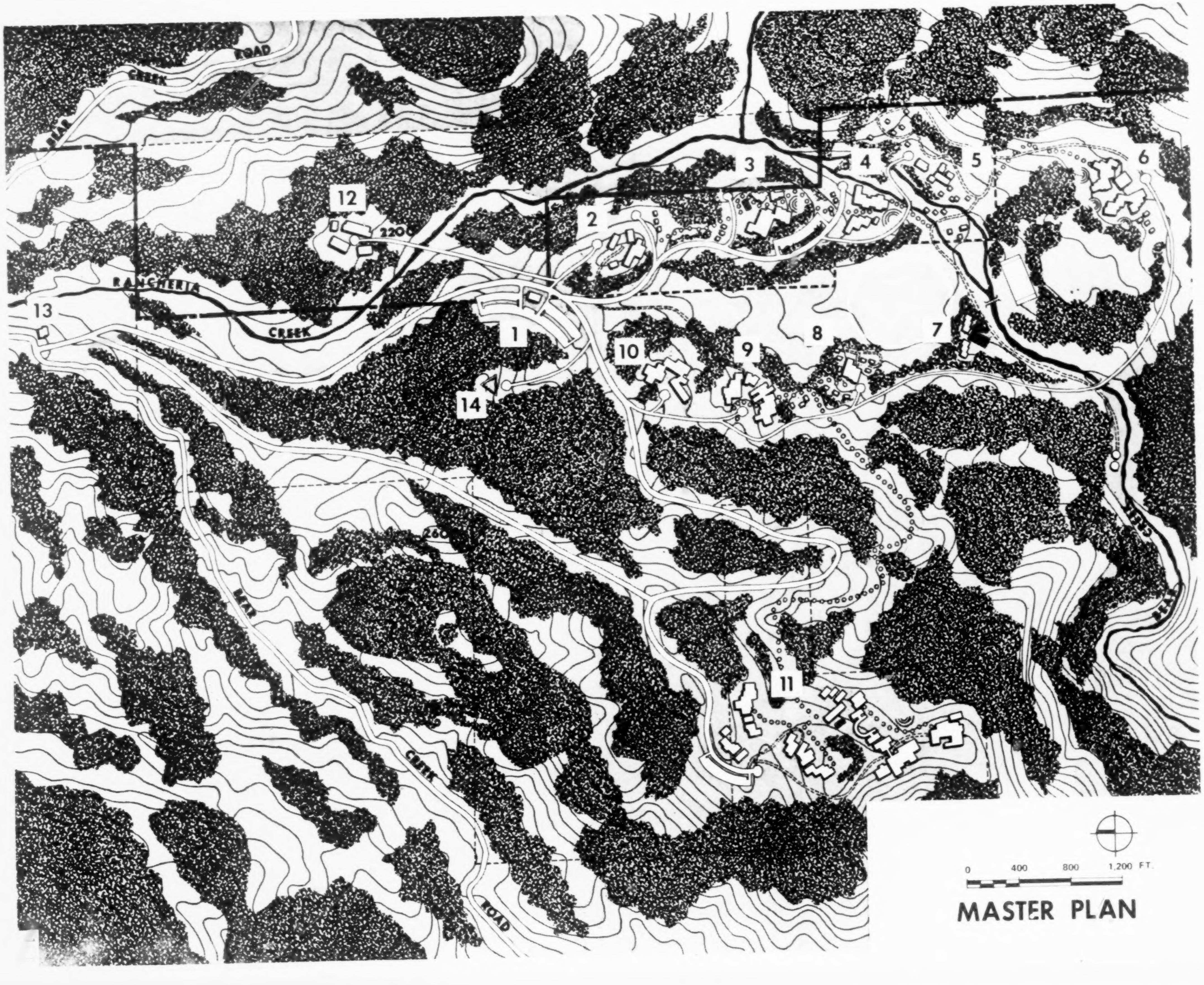
III. **Conference Center and Student Center** (11)

IV. **Environmental Education Center** (10)
  a. Clemmie Gill School of Science and Conservation (5)
  b. Listening Hill Village (3)
  c. Max Cochran Laboratory School (8)
  d. Environmental Research Laboratory (10)
  e. Astrophysical Facility (2)
  f. Facility for Research of Human Behavior (9)

The master plan calls also for the installation of a loop road system for all centers and for the use of service and emergency vehicles, separating pedestrian and vehicular traffic as much as possible. Included in the master plan also is provision for parking facilities for a total of 500 automobiles at three central locations; the entrance reception area, the administration area, and the Conference Center.

MASTER PLAN LEGEND

1. RECEPTION CENTER
2. ASTROPHYSICAL CENTER
3. LISTENING HILL MUSIC CENTER
4 ADMINISTRATIVE CENTER
5. CLEMMIE GILL SCHOOL OF SCIENCE & CONSERVATION
6. HUMANITIES CENTER
7. SWIMMING POOL, PICNIC & BARBEQUE CENTER
8. MAX COCHRAN LABORATORY SCHOOL
9. BEHAVIORAL SCIENCES CENTER
10. ENVIRONMENTAL RESEARCH CENTER
11. CONFERENCE CENTER & STUDENT CENTER
12. MAINTENANCE & BOTANICAL GARDENS
13. SECURITY ENTRANCE STATION
14. HELIPORT


1
2
3
4
5
6
7
8
9
10
11
12
13
14
2200
2600
RANCHERIA CREEK
BEAR CREEK ROAD
BEAR CREEK
0
400
800
1,200 FT.

MASTER PLAN

SECTION VI

PROJECT DEVELOPMENT AND CONSTRUCTION

- Phasing and Priorities
- Recommendations for Additional Land Acquisition
- Property Map
- Budget Costs
- Summary and Conclusions

Phasing and Priorities

It will be necessary to obtain funds for the following:

1) Publish the master plan and brief descriptive material in an eye-catching color brochure. This brochure would be used for future fund raising campagns.

2) Acquire additional land as noted.

3) Obtain a topographical survey within the building area.

4) Proceed with schematic plans, detailed drawings, and utility studies.

5) Construct one center as a nucleus to house all activities on an interim basis. It is suggested that this be the Administrative Center. Additional centers and roads, water, and sewer systems can grow in increments as funds become available.

The following drawings are attached:

1) Master Plan (see page 101)

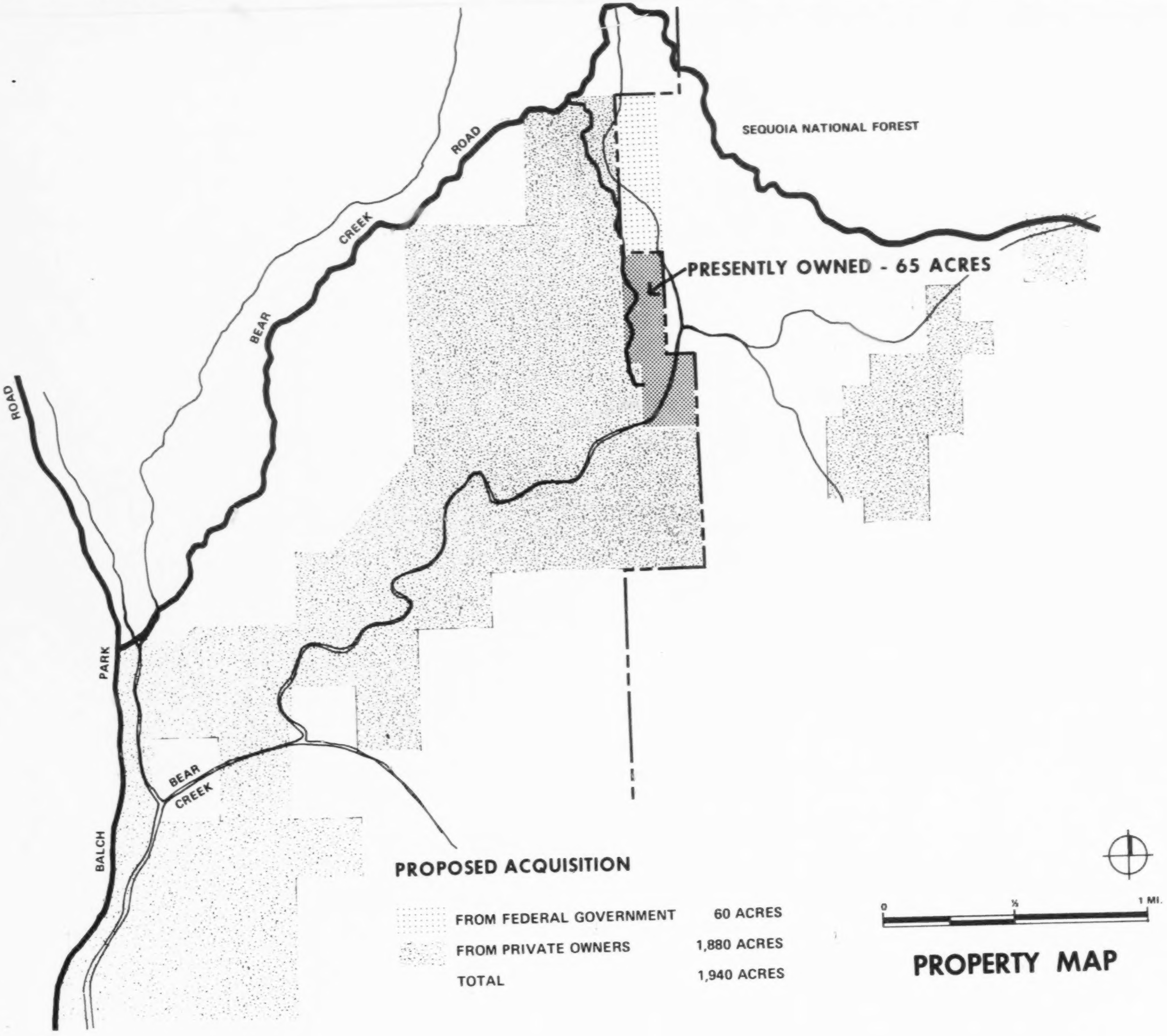
2) Vicinity map showing location map of **SCICON** (see page 9)

3) Land map showing existing property, new private property and new government property to be obtained. (See page 105)

4) Utility Plan (See page 109)

Recommendations for Additional Acquisition

The reader is referred to the accompanying map which shows the land currently owned by **SCICON**. This consists of sixty-five acres. As the map shows, it is recommended that steps be taken to obtain an additional 130 acres of land from the federal government and 1880 acres of land from private sources. The acquisition of this additional land is necessary to provide for future expansion and also to provide a protective or buffer zone to protect the campus from encroachment by commercial or residential factors.


SEQUOIA NATIONAL FOREST
PRESENTLY OWNED - 65 ACRES
ROAD
CREEK
BEAR
ROAD
PARK
BALCH
BEAR
CREEK
PROPOSED ACQUISITION
FROM FEDERAL GOVERNMENT 60 ACRES
FROM PRIVATE OWNERS 1,880 ACRES
TOTAL 1,940 ACRES
0
½
1 MI.

PROPERTY MAP

105/106

Budget Costs

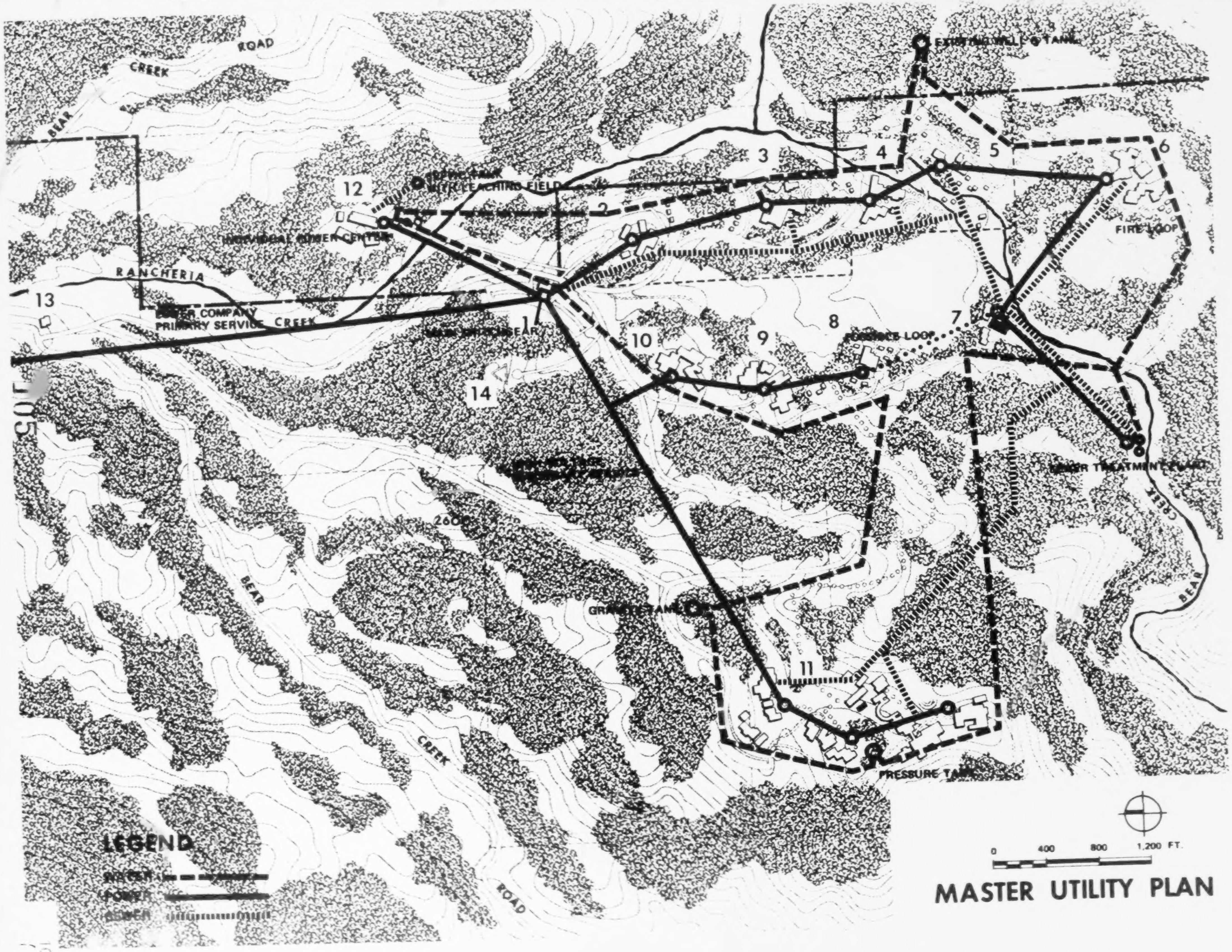
Site		
Purchase price of property		
1880 acres @ $200 per acre = 376,000		
130 acres @ $1000 per acre = 130,000		
	436,000	
Appraisals	2,000	
Escrow costs, title insurance, recording	2,200	
Survey	15,000	
		525,200
Plans		
Architects fee (CCAIA Schedule @ 7.15%)	2,027,600	
County Permit and Plan Check fees	2,800	
Soil Investigation	9,000	
		2,039,400
Construction		
Site development and utilities	4,276,800	
Buildings (568,872 x 35.00)	24,081,000	
		28,357,800
Tests and Inspections during construction		238,000
Furniture and Equipment		3,560,000
Contingencies (5%)		1,417,900
	Total Cost	36,138,300

Escalation

The above figures are based upon April, 1971 prices.

Allowance for escalation should be made at the rate of 8% per year to the start of construction.

The accompanying **Master Utility Plan** shows the locations and plans for necessary water, power and sewer lines.


ROAD
CREEK
BEAR
12
SEPTIC TANK WITH LEACHING FIELD
2
3
4
5
6
EXISTING WELL & TANK
FIRE LOOP
INDIVIDUAL SEWER CENTER
RANCHERIA
13
POWER COMPANY PRIMARY SERVICE
CREEK
1
MAIN SWITCHGEAR
10
9
8
DOMESTIC LOOP
7
SEWER TREATMENT PLANT
CREEK
BEAR
14
2600
BEAR
CREEK
ROAD
GRAVITY TANK
11
PRESSURE TANK
LEGEND
WATER
POWER
SEWER
0
400
800
1,200 FT.

MASTER UTILITY PLAN

Summary and Conclusions

The report of recommendations by the multi-disciplinary team responsible for the design of the long-range planning program for the development at **SCICON** is summarized as follows:

A. Master Plan requirements for new facilities:

1) Expand indoor and outdoor teaching facilities and housing for elementary and secondary students and their teachers visiting **SCICON** for the one week program of study of the natural environment.

2) Provide facilities for teaching, study and research in expanded programs covering music, astrophysics, environment and ecology, behavioral sciences, humanities and arts.

3) Develop a conference center to serve small and large groups both for the **SCICON** teaching and research program, for students, for professional meetings and outside groups.

B. Master Plan recommendations:

1) Obtain additional property as shown on maps herein in the amount of 1880 acres of private land and 130 acres of government land. This will furnish the following benefits:

   a. Provide for expansion of facilities and utilities to accommodate a future population of 1250.

   b. Protect the natural environment and ecology, the nature trails, streams and land around **SCICON**.

   c. Shelter the night sky for viewing at the astrophysical observatory from encroachment by unwanted light.

2) Develop nine activity centers, each consisting of a closely knit cluster of buildings located on a natural bench or gentle open slope and harmonizing with the surroundings. These centers would consist of the following:

   Administration
   Clemmie Gill School
   Listening Hill Village
   Astrophysical Laboratory
   Max Cochran Laboratory School
   Environmental Research Laboratory
   Facility for Research of Human Behavior
   Conference and Student
   Humanities

3) Provide a system of small buses for transportation within the campus so that vehicular traffic would be kept to a minimum.

4) Install a loop road system for access to all centers and for service and emergency vehicles, separating pedestrian and vehicular traffic as much as possible.

5) Furnish parking for a total of 610 cars for staff and visitors at three central locations: The entrance reception area, the administration area, and the Conference Area.

C. Scope and Costs

1) The facilities shown on the accompanying master plan and described in the preceding pages will provide for a total population of 1250 students, researchers, staff and visitors.

2) These buildings will encompass a total area of 637,080 gross square feet.

3) It is estimated that the cost of these facilities at April, 1971 prices will be $36,068,300. This includes the cost of property, plans, construction, tests, furniture and equipment, and contingencies. The costs should be increased for escalation at the rate of 8% per year to the start of construction.